

**THE QUALITY OF INTRA-PARTUM CARE IN A GAMBIAN RURAL MAJOR HEALTH CENTRE**



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**In partial fulfillment for the award of the Master of Philosophy Degree in International  
Community Health**

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**MAY 2012**

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## **ABSTRACT:**

**Background:** The health of women and children remain to be a major challenge in the world, particularly in developing countries. It has been proven that rendering quality maternity care means providing care that is evidence-based, and practices that have proven to be effective need to be encouraged. The instrument for the non-participant observation aimed to collect information on practices performed on laboring women from admission to discharge. This was compared with the World Health Organization Technical Working Group's categorization on Normal Birth.

Direct observation of laboring women with established normal labour and review of records of those observed was conducted for the quantitative paper.

Women's views were explored using the different interview guides: one for the exit interview, the other for the focus group discussion. The women were asked about the care they receive, perception on quality of care; on the environment of the delivery ward; and on the health care providers; and what will be their recommendations for better quality of care for women who come for labour and delivery care.

The in-depth interview for health care providers was to know what are their views and perceptions of quality of care and the use of evidence-based practices; and also their suggestive recommendations for improvement.

An assessment of facility's readiness for emergency obstetric care was conducted, exploring the various service areas of the facility that have a link with labour and delivery, with the maternity unit included in this assessment.

A staff audit was also conducted with special focus on health workers who are assigned to the delivery ward.

**OBJECTIVES:** To assess practices and quality of delivery care during normal childbirth in Soma Major Health Centre in The Gambia.

**MATERIALS AND METHODS:** The study was both a retrospective and prospective cross-sectional design combining both quantitative and qualitative methods.

Maternity service data for the previous year (2010) was explored. A total of 101 labouring women were observed as part of the quantitative part.

A total of fifteen post-partum women who were not part of the non-participant observation were interviewed, whereas twenty post-partum women who were not also part of the non-participant observation were invited to a focus group discussion. In-depth interview guide and focus group discussion guide were used. A total of eleven health care providers were also invited to an in-depth interview on a one-on-one basis. These health care providers work in

the delivery ward, although two of these care providers who had one time worked in the delivery ward but currently assigned to the Reproductive and Child Health Clinic of the facility were also included. An interview guide was used for health care providers too.

## **RESULTS:**

All women [101] were instructed to be in lithotomy position during delivery. Examination of the placenta was found to be low, 20 [19%], women allowed to take oral fluids was found in 50 [49%] of the women observed. The parenteral prophylactic use of oxytocin was found to be 62 [61%], whereas that of ergometrine use was 29 [28%].

Manual exploration of the uterus was found to be common, observed in 81 [80%] of the 101 deliveries, which is not in line with evidence. Although assessment of vital observations for blood pressure and temperature taking and recording was found to be high, the use of the partograph throughout the labour process was found to be very low [13, n=101]. Routine episiotomy was given to 29 [28%] women, out of whom 28 were primi-parous women.

Infection control practices through application of the universal precautions and health care provider giving of information on results of examination were found to be infrequent. Unfortunately in 99% [n = 101] of the deliveries observed, the instruments were regarded unsterile. Information on results of examination at time of admission was observed in only 3 [n =101] of the women. Baby placed on the abdomen of the mother immediately after delivery was found to be very low, 15 [n =101].

Practices which are clearly harmful or ineffective and should be eliminated were common in this study; therefore most practices were not evidence-based, although there seem to be a high awareness amongst health care providers on these evidence-based intra-partum care practices.

Problems of staff attitudes, poor communication /interpersonal skills, inadequate midwives, insufficient resources, supplies, equipment; medicines for maternity care have been mentioned by both the health care providers and women.

**CONCLUSION:** In the overall, it may be concluded that most practices in this delivery ward are not evidence-based, and care is substandard.



## **ABBREVIATIONS AND DEFINITION OF TERMS:**

**MOHSW:** Ministry of Health and Social Welfare

**WHO:** World Health Organisation

**WTT:** Walk-Through Tool. This an adapted rapid assessment tool that contributes to the assessment of the structure, as part of the tools used in this study in the assessment of quality of intra-partum care within the Donadedian model framework.

**Maternal death:** this is defined as “the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes” (WHO).

**Maternal health:** this refers to the health of women during pregnancy, childbirth and the post-partum period (WHO).

**Maternal mortality ratio:** the number of maternal deaths from pregnancy-related causes per 100 000 live births (WHO).

**Stillbirth rate:** the annual number of babies born dead after 28 weeks of gestation per 1 000 total births (WHO).

**Neonatal mortality rate:** the number of neonatal deaths (deaths in the first 28 days of life) per 1 000 live births (WHO).

**Infant mortality rate:** the number of deaths under one year of age per 1 000 live births (WHO).

**Under-five mortality rate:** the annual number of children who die between birth and five years of age per 1 000 live births (WHO).

**Contraceptive prevalence rate:** the percentage of currently married or in-union women age 15-49 years who are currently using a modern method of contraception (WHO):

**Antenatal care coverage:** the annual number of pregnant women attended by trained personnel per 100 live births in the same year (WHO).

**Total fertility rate:** this is the number of children that would be born per woman if she were to live to the end of her child-bearing years, and bear children at each age in accordance with prevailing age-specific fertility rates (UNICEF, The State of the World's Children, 1996).

**Total health expenditure:** defined as the sum of general government expenditure on health (commonly called public expenditure on health), and private expenditure on health (WHO World Health Report, 2006).

**Skilled birth attendant:** an accredited health professional such as midwife, doctor or nurse, who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate post-natal period, and in the identification, management and referral of complications in women and newborns (WHO).

**Midwife:** this is a person who, having been regularly admitted to a midwifery educational programme, duly recognized in the country in which it is located, has successfully completed the prescribed course of studies in midwifery and has acquired the requisite qualifications to be registered and / or legally licensed to practice midwifery (WHO, ICM, 2005).

**Para (or parity):** means the number of live born children a woman has delivered; e.g. para 1 means woman who has delivered one child for the first time.

**Pre-eclampsia:** an elevated blood pressure and proteinuria after 20 weeks gestation of during labour / or within 48 hours of delivery (WHO).

**Eclampsia:** Convulsion during pregnancy, intra-partum or post-partum as a result of an elevated blood pressure (WHO).

**Primary Health Care:** essential health care based on practical, scientifically sound, and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community

and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination (WHO).

**Health:** a state of complete physical, mental and social wellbeing, and not merely the absence of disease or infirmity (WHO).

**Health worker:** in this study, it is defined as any person who work in a health facility, be it skilled or unskilled, but gives health care or health-related work, such as doctor, nurse, midwife, cleaner, nurse auxiliary, dispensing assistant, etc.

**Health care provider:** in this study, it refers to skilled or unskilled attendants who give care to laboring women in a health facility.

**Intra-partum care:** refers to care given to a woman in labour and delivery, and her unborn baby.

**Vernix caseosa:** vernix caseosa, also known as vernix is the waxy or cheese-like white substance found coating the skin of newborn human babies ([www.en.wikipedia.org/wiki/vernix\\_caseosa](http://www.en.wikipedia.org/wiki/vernix_caseosa))

## **DEDICATION**

This piece of work is dedicated to my late mother **Alepi Jatta** and father **Kalaamo Simati Sambou** for all the support they gave me during my early years.

To my mother, I always remember the pains she took for me, especially when my father passed away to ensure that I am in good shape at school.

To my dear wife **Isatou Jatta** and my daughters and son, **Aminata, Alima, Assanatou** and **Omar (NFamara)**, I love you all. You have always been there for me in perseverance during the long absence.

To my dear blood sisters, **Borie, Majaye** and **Metta (Therese)**, I thank you all for your prayers and good wishes during my studies.

In high esteem, this piece of work is also dedicated to my late elder brother **Ibrahima (Sampa) Sambou** who passed away during the writing of this thesis in Norway. He had been such a very caring brother and supportive of all my endeavours.

*To all Sambou Kunda clan of Sankul Benni Sambou origin, the Jola Kalorn ethnicity, this piece of work is dedicated to you all.*

## **ACKNOWLEDGEMENT:**

I highly appreciate all the support, motivation and encouragement **Dr. Mamady Cham** continued to give me. He had been and still continues to be my source of inspiration, the courage and motivation he gave me for university education. Dr. Cham gave me the hope and aspiration for higher education, without him, the dream would not have been a reality.

To **Mr. Abdou Jammeh**, I shall always remember the encouragement, support, motivation and guidance you gave me throughout the academic studies. Mr. Jammeh's supervisory work on my thesis was tremendously resourceful.

To **Professor Johanne Sundby**, without your expert support and supervision, this thesis would not have been possible. Your guidance is deeply appreciated.

Unforgettable gratitude goes to **Line Low** and **Ragnhild**, both of the Institute of Health and Society, University of Oslo for their guidance and encouragement.

My unique appreciation goes to all the women and health care providers who participated in this study, and also my team of research assistants **Dudou Sowe** and **Malick Ceesay**. It is indeed in the hope that the findings of this study will also contribute in a small, but rich way towards the reduction of maternal and neonatal mortalities and morbidities of this administrative region, Lower River Region, thus contributing to national aspirations for achieving millennium development goal 4 and 5.

Uncountable thanks goes to the officer in-charge of study facility **Mr. Basirou Drammeh** and his team of staff for the support and motivation given me during the conduct of this study. The support and contribution by the Regional Health Office is well acknowledged and appreciated.

My heartfelt thanks and appreciation goes to the Norwegian Government through the Quota scheme for financing my studies, and the financial contribution to the conduct this study.

Thanks to the Government of The Gambia through MOHSW for allowing me to be in Norway for my studies and support.

**Sambou, Ngally Aboubacarr**

**Oslo, June 2012**

## CHAPTER 1: INTRODUCTION

### 1.1 INTRODUCTION

The health of women and children remain to be major challenges in the world, particularly in developing countries. According to the World Health Organization (WHO) maternal deaths are concentrated in Sub-Saharan Africa and Southern Asia, which together accounted for 87 percent of such deaths globally in 2008. The vast majority of maternal deaths are avoidable. The largest proportion of such deaths are caused by obstetric haemorrhage, mostly during or just after delivery, followed by eclampsia, sepsis, complications of unsafe abortion and indirect causes, such as malaria and HIV [1]. Improving maternal and child health are amongst the main global health challenges and reduction of maternal mortality ratio by three-quarters and reduction of child mortality by two-thirds between 1990 and 2015 are the targets of Millennium Development Goals 5 and 4 [1]. It has also been stated that the highest levels of under-five mortality continue to be found in Sub-Saharan Africa, where one in eight children die before the age of five (129 deaths per 1 000 live births), nearly twice the average in developing regions overall and around 18 times the average in developed regions [1].

In the developing regions as a whole maternal mortality ratio dropped by 34 percent between 1990 and 2008: from 440 maternal deaths per 100 000 live births to 290 maternal deaths per 100 000 live births [1]. Globally, every year, 358 000 women aged 15-49 die of pregnancy and child-birth-related complications. Every year, 2.6 million children are stillborn, and a further 8.1 million die before their fifth birthday, including 3.3 million babies in the first month of life [2]. There is compelling need to focus more attention in efforts to reduce both maternal and child morbidity and mortality as both millennium development goals 4 and 5 are not on track. It has been noted that interventions that work for women and children include: delivering high-quality services and packages of interventions in a continuum of care and quality skilled care for women and newborns during and after pregnancy and childbirth (routine as well as emergency care) [3].

It has been proven that rendering quality maternity care means providing care that is evidence based, and so practices that have proven to be effective need to be encouraged. The use of evidence-based maternity care in normal child birth encouraged the adoption of practices of proven benefits and the elimination of ineffective and sometimes harmful practices. Evidence-based medicine is defined as the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients [4].

In addition, it is observed that not much attention has been given to evaluating the quality and practices of such care, particularly for normal birth. In developing countries, this becomes a big challenge, and even more on evaluating quality of normal birth in a purely rural setting where resources both human and material may be scarcer than an urban setting.

This study was conducted in a rural setting: a rural Major Health Centre which is expected to offer emergency obstetric care services for a population of 80 000. This study aimed to assess the practice and quality of care during normal labour. For this study, normal labour is defined as: spontaneous in onset, low-risk at the start of labour and remaining so throughout labour and delivery. For women, human rights include access to services that will ensure safe pregnancy and child birth [5]. The death of a woman during pregnancy or child birth is not only a health issue but also a matter of social injustice [5]. There is enough evidence that the health of a mother is also linked to the health and survival of the infant. Therefore, evidence-based quality intra-partum care can contribute significantly to the reduction of both maternal and child morbidity and mortality.

The study documented procedures applied to 101 women in established normal labour. The main objective was to assess the relationship of these procedures to evidence-based practices. The instrument used for non-participant observation gives an overview of 28 observed practices applied to laboring women from admission to discharge using the WHO Technical Working Group in Normal Birth categorization as the “Gold Standard” [6]:

- A. Practices which are demonstrably useful and should be encouraged.
- B. Practices which are clearly harmful or ineffective and should be eliminated.
- C. Practices for which insufficient evidence exists to support a clear recommendation and which should be used with caution while further research clarifies the issue.
- D. Practices which are frequently used inappropriately.

Although this WHO Technical Working Group Document has been used as a “gold standard”, the applicability of Maternity Care Guidelines of The Gambia Ministry of Health and Social Welfare which is in line with the WHO guideline has been reflected on. In trying to understand the quality of intra-partum care, we first conducted a simple staff audit of all who



are assigned to the labour ward of this health facility. This is because a high workload with an acutely understaffed labour ward may have potential to negatively affect quality of care. In this we tried to look at what is available in numbers by category of staff against the recommended at Ministry of Health and Social Welfare (MOHSW) level.

## **1.2 STATEMENT OF THE PROBLEM**

The study site is not benefitting from any project that focused its attention in up-grading maternity services, compared to other major health centres that are benefitting from such projects at the moment. Maternal and Child health Advocacy International (MCAI), in collaboration with Advanced Life Support Group (ALSG) both United Kingdom-based charities dedicated to saving lives of women and neonates by providing skills training to nurses and midwives, including renovation and redesigning maternity units of major health centres are currently operating in three Health regions of The Gambia. Soma Major Health Centre is not included as yet in such a worthwhile venture.

Therefore, aware of the still uncomfortable maternal and infant health indicators for The Gambia, although some progress has been registered, one may deduce that a rural health facility may have even more disturbing indicators, if region-specific. According to World Health Statistics 2011 Report of the World Health Organization, The Gambia has a maternal mortality ratio of 400 per 100 000 live births, with a neonatal mortality rate of 32 per 1 000 live births. The births attended by skilled personnel registered 43 percent for rural, whereas for urban being 83 percent [7]. This means that skilled birth attendants for urban has doubled that of rural (where Soma Major Health Centre is located). A hospital in the country that is expected to have encouraging human and material resources, appear to render sub-standard care [8], then rural less-resourced facility like Soma Major Health Centre may come out with more disturbing results. Moreover, this World Health Organization Report indicated that for human resources, physician density per 10 000 population for The Gambia is at 0.4, whereas that of nursing and midwifery personnel density at 5.7 per 10 000 population. The Gambia situation reveals that skilled health workers are concentrated in the urban area, leaving the rural to be severely disturbed in terms of skilled workers, particularly for maternity care. The issue of poor record keeping has also be cited [8], and then with scanty staffing at Soma Major Health Centre that is without record infrastructure, records may be pathetic. There is therefore enough evidence to focus on quality of intra-partum care on this rural major health centre, serving a population of 80 000 inhabitants [9]. Furthermore, a study conducted in The

Gambia [10] concluded that there is gross unmet need for emergency obstetric care services, meaning that women needing such services are not accessing it. For example, Lower River where Soma Major Health Centre is located had a met need of only 17.6 percent in that study compared to Western (urban) which had a met need of 24.5 percent. The report of the study [10] also stated that no caesarean sections were conducted in the year of study. Soma Major Health Centre as cited earlier is expected to manage obstetric complications using the package of eight interventions identified by the World Health Organization, the United Nations Children's Fund (UNICEF) and the United Nations Population Fund (UNFPA), but sadly it still remains a Basic Emergency Obstetric Care (EmOC) facility for it cannot still perform life-saving operations such as caesarean section and bilateral tubal ligations, in spite of the fact that the infrastructure for such functions is in place. As a referral centre for satellite facilities, women with critical conditions have to be referred to a hospital situated at Farrafenni (17 kilometers away), but referral has to cross the river to reach hospital. If ferry services close, the only alternative is to travel to either Bansang, which is a 96 kilometers away or to Banjul, a 180 kilometers distance. Both these two alternatives are too far for an emergency. Some of the maternity admissions and deliveries in this health centre are high risk, most of which are referred during labour. Interestingly, there are no Gambian medical doctors or obstetricians in this facility hence depend on the services of the Cuban expatriate doctors. It should be noted that the withdrawal of such assistance could affect the quality of obstetric care services even more in this facility. Although Soma serves as a referral point for the satellite health facilities, it also provides outpatient services and mobile outreach reproductive and child health services. Antenatal care is provided by nurses and/ or midwives. Maternal mortality reduction is high on the national agenda and a priority area for the Ministry of Health and Social Welfare. However, this would be difficult to attain in the absence of quality of care. In The Gambia, there is paucity of information in relation to quality intra-partum care, particularly in rural health facilities. As cited earlier [8], an earlier study on quality intra-partum care in The Gambia's main referral hospital indicated substandard care, and practices were not evidence-based. To our knowledge, no such studies have ever been conducted in rural health facilities. Therefore, conducting an almost similar study in a major health centre in one of the rural Health Regions may surface some interesting results that may warrant intervention towards better improvement and the achievement of Millennium Development Goals 4 and 5.

## **1.3 PROFILE OF THE GAMBIA**

### **1.3.1 GEOGRAPHY**

The Gambia is a small country, located on the Western African Atlantic Coast, and it is bordered by The Republic of Senegal to the North, East and South. The country has a land area of about 10 680 square kilometres extending about 480 kilometres inland. The width of the country varies from 24 to 28 kilometres. The Gambia has a population density of 128 persons per square kilometer.

The country is divided into North and South Banks by The River Gambia which runs through the country from the Fouta Jalon Highlands in The Republic of Guinea-Conakry to the Atlantic Ocean.

The country is divided into five administrative Regions and two municipalities: West Coast Region, Lower River Region, North Bank Region, Central River Region, Upper River Region, Banjul City Council and Kanifing Municipal Council.

The Gambia is tropical, characterized by cooler dry season between November to May, and hot rainy season between June and October.

### **1.3.2 POPULATION AND DEMOGRAPHIC CHARACTERISTICS**

The population of The Gambia according to the 2003 Population and Housing Census was 1 360 680, but currently it is projected at 1 705 000. The annual growth rate of the population is 3.0 percent, with 57 percent of the population living in the urban area [7], meaning 43 percent living in the rural area. Forty-two percent of the population is below 15 years and 50 percent of the population are female. Therefore, the population is characterized by its youthful and feminine nature as data indicates. Women of reproductive age (15-49 years) represent 49 percent of the female population according to the 2003 Population and Housing Census.

Life expectancy of The Gambian population at birth has consistently increased over the years as shown below [7]:

**Table 1: Life Expectancy at Birth in The Gambia:**

	YEAR:		
	1990	2000	2009
<b>Males</b>	<b>53</b>	<b>55</b>	<b>58</b>
<b>Females</b>	<b>55</b>	<b>58</b>	<b>61</b>
<b>Both sexes</b>	<b>41</b>	<b>37</b>	<b>32</b>

It is estimated that a Gambian woman on average will give birth to 5 children during her reproductive age period, and the contraceptive prevalence rate is estimated at 17.5 percent. The under-five mortality rate is estimated at 103 per 1 000 live births, with a maternal mortality ratio of 400 per 100 000 live births [7].

### **1.3.3 ECONOMY:**

The Gambia has a small economy, and has been regarded as amongst countries of low income. The Gambia with an open economy with limited resources is one of the least developed countries with a per capita income estimated at USD350 [11]. The traditional mainstay of economic activity has been the production and exportation of groundnuts, although in recent years significant progress has been made in diversifying production and exports towards tourism and trade services [8, 11].

### **1.3.4 HEALTH SERVICES**

#### **1.3.4.1 HEALTH POLICY**

The Gambia has a health policy which is still the machinery for health initiatives, programmes and projects over the years. It has a focus on maternal and child health services. The policy governs most of the health interventions by both the public and private sectors and it is committed to the reduction of both maternal and infant morbidity and mortality [12]. According to the framework (2007-2020), the policy has as one of its strategies to improve the provision of and access to quality maternal, child, and new born care and family planning services [12]. This national document stated that there is high unmet need for emergency obstetric care services, with access to these services constrained by a poorly functioning emergency obstetric system, especially at community level including ill-equipped and

inadequately staffed facilities. Indeed the health policy has realized the salient problems of the Ministry that constrains the effective implementation for maternal and child services. The health policy framework has a basic health package that aim at addressing some of the common causes of morbidity and mortality among The Gambian population, especially women, children, the underserved and the marginalized. The Gambia Health Policy has clearly stated as one of its strategies: “to strengthen and promote twenty-four hours a day emergency obstetric care concept” [60].

#### **1.3.4.2 NATIONAL HUMAN RESOURCES FOR HEALTH POLICY**

A “Human Resources for Health (HRH) Policy” is in place. This policy document is intended to guide stakeholders in the health sector in dealing with human resource problems that continue to impact on the health care delivery system in the country. The policy’s goal is to focus on the entire human resources for health process including planning, training and utilization of human resources for health according to the requirement of The Gambia population. The policy, in agreement with the National Health Policy is committed to the provision of good health care for the population.

#### **1.3.4.3 NATIONAL REPRODUCTIVE HEALTH POLICY**

A National Reproductive Health Policy is in place. The goal of this policy is to improve the quality of reproductive life for all persons living in The Gambia, through the promotion of reproductive health and prevention of morbidity and mortality associated with production [13]. Amongst its guiding principles, this policy stated that: “scientifically sound and medically appropriate sexual, reproductive and child health services and information shall be provided at all times”. This present policy document replaces a former one that expired since 2006.

**Table 2: Health Indicators of The Gambia [7]:**

<b>Indicator</b>	<b>Measure (%)</b>
Contraceptive prevalence rate	17.5 %
Antenatal care coverage	98 %
Maternal mortality ratio	400 per 100 000 live births
Neonatal mortality rate	32 per 1 000 live births
Under 5 mortality rate	103 per 1 000 live births
Skilled birth attendance	57 %
HIV prevalence rate (adults 15-49 years)	2 %

\*Latest figure for percentage for **institutional delivery** not available from the World Health Statistics 2011 Report

### **1.3.5 ORGANIZATION AND ADMINISTRATION**

Historically, The Gambia Government adopted the Primary Health Care (PHC) Approach since its inception in 1978. This approach was first piloted in the Lower River Region, where Soma Major Health Centre is located. The public health care system in The Gambia operates within the PHC strategic framework, which consists of primary, secondary and the tertiary levels.

The primary level is the community based health care services where village health workers and traditional birth attendants are being supervised by community health nurses. The secondary level is the static health centres, both minor and major, and dispensaries; whereas tertiary are the hospitals. In recent years, village clinics are coming up geared towards strengthening the community-based health services, with a midwife or nurse with some midwifery skills to deal with some basic maternity and labour care services at village level.

In line with health policy, the country is divided into six Health Regions with coordinating offices known as Regional Health Teams. The Regional Health Teams are responsible for the co-ordination and supervision of all health and health-related activities within its region of mandate. These teams are therefore responsible also to supervise, co-ordinate and monitor the activities of private health institutions within its Region in the spirit of collaboration and partnership.

### **1.3.6 HUMAN RESOURCES FOR HEALTH OF THE GAMBIA**

As nurses and midwives in the country provide the bulk of the clinical care at all levels of the health care delivery system in the public sector, the geographic distribution of this level of workers is uneven. There may be no doubt that the impact of this nursing and midwifery density per 10 000 population, with mal-distribution that favour urban over rural, will affect the quality of health care delivery within the public health sector, particularly the rural setting.

### **1.3.7 REPRODUCTIVE, CHILD HEALTH AND FAMILY PLANNING SERVICES**

The aim of this programme unit is to improve the health and well-being of women and children through provision of: antenatal care, safe delivery, post-natal care, family planning, and nutrition education, community and women education on danger signs of pregnancy and child birth, child welfare services including immunization growth monitoring and development. Within the Primary Health Care (PHC) framework, The Gambia Government has been expanding its health infrastructure nationwide to ensure that majority (at least 98 %) live within an approximate radius of 5 kilometres of health services be it community-based services or the reproductive and child health services outreach posts. These services are both static and mobile clinics. The static services include antenatal care, safe delivery, post-natal care and immunization, whereas the mobile services include mainly antenatal care and immunization. Both preventive and curative services are rendered to women and children.

Of recent, village clinics with a stationed nurse or midwife are increasing in order to enhance the care given to women and children at village level, and also other members of the communities around. Also in recent years, midwives and nurses from time to time are being trained on life-saving skills with special emphasis on obstetric emergencies to improve the quality of the provision of emergency obstetric care (EmOC) particularly at the Major Health Centre level. All these are with the aim of contributing towards the reduction of both maternal and neonatal morbidity and mortality.

An EmOC needs assessment conducted in The Gambia indicated that The Gambia has four Comprehensive Emergency Obstetric care (CEmOC) health facilities serving a projected population below 1.5 million [10] at that time. These facilities may seem enough as far as the United Nations (UN) Guidelines are concerned which recommend at least one facility for every 500 000 population. But it is disheartening to note that some of these facilities that have been acclaimed to offer comprehensive emergency obstetric care services sometimes are

not able to function as such due to the unavailability of qualified medical personnel for surgical functions at all times. There is no reliable format in place to ensure the availability of a medical doctor with surgical skills, therefore as expatriates, when on leave or otherwise, replacement becomes the biggest issue. In those crucial moments, some obstetric cases that may need surgery have to be transferred to the main referral hospital, located in the capital city (urban). If such unfortunate moments arise, then a facility like Soma Major Health Centre has to take the journey to the capital city for the survival of women and neonates.

### **1.3.8 REFERRAL SERVICES IN THE GAMBIA**

In line with National Health Policy, patients are supposed to be referred from the primary level to the secondary level, and then to the tertiary. Although each minor or major health centre in the country has an ambulance, this single vehicle tend to have dual purposes, one for evacuation of emergencies from one level to the other, and trekking of the health facility staff for reproductive and child health services. But this status quo has now been improved through the Ministry of Health and Social Welfare's collaboration with Riders for Health ( a registered charity committed to management of health transport resources), most of the time provide a vehicle for the out-reach treks for facilities.



## CHAPTER 2: BACKGROUND

### 2.1 EPIDEMIOLOGY AND BURDEN

Maternal mortality is a tragedy that is a great loss to the family and the community. It has also been regarded as an issue of inequity and social injustice. This is simply because women are critical to socio-economic development, and as a matter of fact, their reproductive health is a vital factor in this. It has been stated that when a woman dies, the health and emotional development of the child she may have is negatively affected. An African tradition summarizes the difficulties faced by pregnant women in many parts of the world: “a pregnant woman has one foot in the grave” [13]. “Whose faces are behind the number? What were their dreams? They left behind children and families. They also left behind clues: as to why their lives end so early” [14]. The consequences of near-miss events (severe, life-threatening complications that women survive) and maternal deaths on women and their families can be substantial, and recovery can be slow, with lasting sequelae [15]. Although some women may not die during labour and delivery, but some sustain life-long complications and suffering. Some stressors before or after child birth have been identified: these include lack of education, money and decision-making power as well as the pressure to reproduce, the fear of complications, and a perceived inability to control the danger. This increased, repeated vulnerability linked to gender makes maternal health a unique issue [15]. In the Rakai district of Uganda, the maternal mortality ratio was five times higher in HIV-infected than in HIV-uninfected women, and in Pointe Noire, Republic of Congo, the relative risk was 4 [16]. The excess mortality attributable to HIV was equivalent to a maternal mortality ratio of more than 1 300 maternal deaths per 1 00 000 live births in both settings [16]. This dramatic explanation has shown that the pandemic of HIV/AIDS has increased the risk of obstetric complications such as anaemia and tuberculosis, although HIV prevalence for The Gambia remains low [2% for adults aged 15-49 years].

Adding maternal morbidity to mortality, the 1993 World Bank’s assessment of the global burden of disease estimated that 18 percent of the disease burden of women aged 15-49 was due to maternal causes, made these the leading cause of ill-health in this age group [17]. Women account for the brunt of non-paid work throughout the world. By one account if this non-paid work of women is given economic value, the total contribution of women’s unpaid work in the household globally would add the equivalent of one-third of world’s gross

national product [18]. The effects of poor maternal health can last for generations. Women who do not gain enough weight during pregnancy increases the chances that their newborns have low birth weight. Girls who were born underweight are more likely to be stunted, grow as underweight adults, and experience obstructed labour [18]. There is enough evidence for stakeholders to invest in maternal and child health, hence women are so productive to be left alone without much quality care and attention they deserve.

As stated, an estimated 358 000 maternal deaths occurred worldwide in 2008, a 34 percent decline, developing countries continued to account for 99 percent (355 000 deaths) of global maternal deaths [19]. This reduction is not enough if countries are committed to meeting the targets for millennium development goal 5. This is an indication that developing countries like The Gambia has to practically join this global wagon for the reduction of both maternal and child morbidity and mortality. It has been documented that causes of maternal deaths are: severe bleeding, infections, eclampsia, obstructed labour, unsafe abortion, and other direct and indirect causes [20]. This is not different from causes of maternal deaths in The Gambia.

Malaysia, Sri Lanka, Thailand and Egypt halved their maternal mortality ratios by increasing the number of midwives [21]. The International Federation of Gynaecology and Obstetrics and International Confederation of Midwives recommend that there be one skilled provider for every 5 000 individuals [22]. Unfortunately, The Gambia is very far from this. This is even compounded as most of the skilled health workers are concentrated in the urban area, leaving the rural scanty. Historical records demonstrate the significant improvements that can be achieved when key interventions are in place. Sweden, as a result of national policy favouring professional midwifery care for all births, coupled with establishment of standards for quality of care was about to reduce maternal mortality to the lowest levels. Denmark, Japan, Netherlands and Norway took similar strategies [5]. Similar evidence of effectiveness of health care has been seen in Sri Lanka, China, Cuba and Malaysia [5]. This Joint WHO, UNFPA, UNICEF and World Bank Statement [5] posits that these examples clearly demonstrate that a country's overall economic wealth is not in itself the most important determinant of maternal mortality.

It has also been documented that at least 300 000 babies in Africa die as intra-partum stillbirths- dying during childbirth from childbirth complications such as obstructed labour [23]. Among babies born alive, another 290 000 die from birth asphyxia, also primarily related to childbirth complications [23] Some of these deaths could be prevented by skilled care during pregnancy, childbirth, and the immediate postnatal period [23]. It is clear that quality intra-partum care which includes skilled attendance at birth is crucial, and that the survival of the mother is crucial to the future of the young infant.

A study conducted in Sri Lanka suggested that measuring client satisfaction can be used to assess and improve quality of care [24]. In this study aspects identified that deserve greater attention for improvement include cleanliness, sanitary facilities and availability of beds in the obstetric settings, and inter-personal relationships of care providers to deliver a courteous service [24].

Another similar study conducted in Ethiopia on client satisfaction shows that predicted by wanted status of the pregnancy, immediate maternal condition after delivery, waiting time before seen by health worker, perception about the waiting area for mothers and relatives, health professionals' measure taken to assure privacy during maternal examinations, and service cost [25]. Another study also conducted in Nairobi, Kenya [26] had similar results as in [24, 25], that a woman's past experiences tend affect her satisfaction with care given to her.

A study conducted in the main referral hospital in The Gambia shows a 168 percent increase in the risk of maternal death during the malaria season; results shows that during this season there was an eight-fold increase in the risk of death for anaemia and a 5.4-fold increase for eclampsia [27]. Yet again a study conducted in The Gambia suggests that major gaps exist in the physical and human resources needed to carry out basic life-saving surgical interventions [28]. These surgical functions include the obstetric surgical functions which is non-existent in Soma Major Health Centre, like other major health centres in the country. It is evident that constraints for The Gambia maternal and child health services are known, what is needed is to implement the interventions that have proven to be effective; to enable health workers render services that are evidence-based and of quality.

Failure to comply with the norm of fertility, in a culture where more than 90 percent of women become mothers, is known to have serious consequences [29]. The Gambia is a male-dominated society, where woman's ability to have a child is valued, and so those infertile women are scorned and sometimes disrespected. This has psychological and emotional

implications on infertile women such as feelings of anxiety, depression, worthlessness, guilt, grief, jealousy, possible domestic violence and disrespect [29, 30, and 31]. Therefore for women to show that they are fertile, their happiness is to have a child after the other, as seen in some of the women in The Gambia, particularly rural women. This has some implications on their reproductive health. For women infertile, because of the socio-cultural view, some of them exhaust their little resources to seek treatment in a bid to have a child, both traditional and modern medicine. Some even resort to spiritual healers in The Gambia.

*“Although much progress has been made, every year 7.6 million young children die from preventable causes, over 350 000 women lose their lives unnecessarily from complications of pregnancy and child birth.....the rate of decline is still not enough to save 16 million lives by 2015”.....Ban Ki Moon, UN Secretary General, 66<sup>th</sup> Session of the General Assembly, 20<sup>th</sup> September, 2011.*

## **2.2 DEFINITION OF QUALITY:**

History tells us that there is a considerable change in both the concept and application of quality in health care. The word “quality” has been perceived differently throughout history. During the Babylonian era, King Hammurabi’s time (about 2000 BC), quality meant that errors were out of the question. People making mistakes were to suffer the same consequences their mistake has had on others: “fracture for fracture”, “eye for eye”, and “tooth for tooth” as the Bible later put it [32].

The definition of quality of care (QOC) determines both the content and the process of care. In 1966 Donabedian defined quality of care in a unique way: “quality of care is the extent to which actual care is in conformity with present criteria for good care” [33].

Another more recent definition of quality of care by Institute of Medicine (IOM) in the same article [33] states: “Quality of care is the degree to which health services for individuals and populations increase the likelihood of desired outcomes and are consistent with current professional knowledge”. Quality of care has been evolving and shall continue to evolve in our dynamic world. The definition of IOM has been adapted to achieve a definition of quality of care relevant in the context of maternal health. It defines quality of care as “the degree to which maternal health services for individuals and populations increase the likelihood of

timely and appropriate treatment for the purpose of achieving desired outcomes that are both consistent with current professional knowledge and uphold basic reproductive rights”.

This working definition provided the basis from which the study formulated a quality assessment framework.

### **2.3 CONCEPTUAL FRAMEWORK**

This study focused on the practices and quality of delivery care in Soma Major Health Centre. The study assessed a number of distinct but related components of delivery care provided to women delivering in the health centre delivery ward. These included clinical care during labour and delivery, support during labour and delivery, resources both human (staff audit) and material, physical environment where care is being provided.

Donabedian’s model of quality assessment was used. This model was used for the reason that it describes all the salient components and elements of the health care delivery system that are essential to quality care [structure-process-outcome framework]. For this study, output (instead of outcome) was used as a proxy for outcome.

Structure assesses the quality of health care through the study of the settings in which care takes place. The assumption is that without required health centres, staff and equipment, good health care will not be achievable.

Process considers not only that equipment exists, but also whether what is currently thought to be proper health care is applied, including clinical history, physical examination, diagnostic tests, justification of diagnosis and treatment. The assumption according to them is that, without procedures, good health outcomes will not be achievable.

Outcome considers whether a change in a person’s current and future health status can be attributed to antecedent health care [34]. Output is used in this study instead of outcome for outcome is difficult to measure. Therefore, output indicator is used as a proxy for outcome. Outcome assessment therefore revolves around measuring changes in health status as stated [34]. Output then here means the number of cases and patients (as proportion of eligible) that

are handled at the facility. The woman and provider satisfaction, prioritizing effectiveness, safety and client-centredness as the core dimension of quality, and the number and types of procedures that are performed (caesarean section, vacuum, blood transfusions, and manual removal of retained placenta, for example).

A research conducted in rural Australian hospitals [35] in the light of the Donabedian structure-process-outcome model viewed that the model might be used as a framework for considering how to measure the quality of care in rural hospitals. Although the study was conducted in Australia, the results were telling on the usefulness of the model.

But Adeyi and Morrow [34] cited the following limitations to the structure-process-outcome model of Donabedian:

- the presence of observers may influence the performance of workers. According to them, some authors are of the view that a method like this one is likely to over-estimate quality;

- routine health information systems in developing countries tend to be weak and under-utilized, and the quality and selectivity of the data may not meet the needs of thorough evaluation.

In an attempt to assess facility readiness for emergency obstetric care, Gill and colleagues [36] designed a tool called the walk-through-tool (WTT). It seem to be a useful tool in looking at infrastructure, supplies, medicines and equipment as an essential part of structure in assessing quality of delivery care. Gill and colleagues stated that in addition to its benefits to emergency obstetric care, the WTT helps to develop generally stronger and more efficient health care delivery service that affect not only obstetric outcomes, but also other medical emergencies that depend on common systems such as pharmacy, laboratory, infection prevention and control, and surgical services. This tool was appealing to this study, aware that Soma Major Health Centre being in a rural setting, is the only referral point for satellite facilities in the Health Region.

The Donabedian structure-process-outcome model has been successfully used in different countries of the developing world such as Nigeria [37], Botswana [38], Jordan [39], Colombia [43], Iran [99], and The Gambia [8].

## **2.4 QUALITY ASPECTS OF MATERNITY CARE:**

A study conducted in Lebanon [40] shows that hospitals do not appear to be keeping up-to-date on best practice, nor do they appear to have mechanisms for systematically evaluating their own practice. A large proportion of hospitals in this Lebanon study perform routine procedures and interventions which either have no demonstrable medical benefit, or which may even carry a risk or be harmful to women and their infants. Such a study was also conducted in Egypt [41], which shows that normal labour cares were largely not in accordance with WHO evidence-based classification of practices for normal birth.

Similar studies conducted in The Gambia [8], Palestine [42], Colombia [43] and China [44] also shows that practices were not following best available evidence.

A study conducted in Uganda [45] on acceptability of evidence-based neonatal care practices in rural Uganda concludes that the recommended maternal-newborn practices are acceptable to both community and health care providers, but often are not practiced due to health systems and community barriers.

A more effective resource allocation, complemented by efforts to implement only those practices that are effective, should be a priority to improve the quality of maternity services [46]. The problem of quality as an agenda for intra-partum care is not sufficient for only those professional, clinical practices, but must be linked to policy and administrative support, together with a care that is responsive to women's and their family member's needs [46].

Evidence-based health care practice should be complemented by evidence-based implementation strategies [46].

Hundley and Ryan [47] asserted that the systems of care on offer do influence women's preferences for aspects of intra-partum care. The availability of a health facility is not enough; women and family members need to be aware of the services available for them to be motivated to use the facility. To reduce maternal deaths dramatically, all women need access to high quality delivery care with at least three key elements: skilled care at birth, emergency obstetric care in case of complications and a functioning referral system, which ensures access to emergency care, if needed [48]. Studies have shown that around 15 percent of live births are likely to need emergency obstetric care and caesarean sections may be required in 5-15 percent of births [49].

It is known that most users of maternity care services, unlike other health care services are well, although some of them may develop complications. Furthermore, maternity care services focuses both on the pregnant woman and her unborn child. Therefore care should be given to the mother that is safe and does not affect the unborn child. In addition, interventions targeting either the mother or the unborn child need to be weighted to see how much an intervention affect the other. The National Reproductive and Child Health Policy [13] articulated that sexual and reproductive and child health services shall be provided in a culturally acceptable fashion (respectful of all individual cultures) and of good standard and quality.

Maternity care services, unlike other health care services touches the emotional, cultural, sensitive and in some environments, religious area of childbirth. The health care provider as a matter of fact has to put these into consideration when dealing with a client for maternity care.

#### **2.4.1 EVIDENCE-BASED PRACTICES**

Ensuring that health professionals practice according to evidence-based standards is important since it affects the quality and costs of care patients receive [50]. Six evidence-based care practices promote physiological birth: avoiding medically unnecessary induction of labour, allowing freedom of movement for the laboring woman, providing continuous labour support, avoiding routine interventions, encouraging spontaneous pushing in non-supine positions, and keeping mothers and babies together after birth without restrictions on breastfeeding [51]. As childbirth is a normal process for most healthy women, the potential for routine interventions to do harm is greater than that for interventions used in the context of established ill health. It is therefore particularly important that routine interventions are not implemented without clear evidence that improve outcomes [52]. Hofmeyr [52] has highlighted that studies in low-income countries indicated outdated and inhumane labour practices, since changing entrenched practices is known to be exceptionally difficult.

For example, the duration of the first stage of labour may be reduced about one hour in women who maintain the upright position and walk around; they are also likely to receive on need less epidural anaesthesia where available. Since the review did not find any adverse effects associated with remaining upright, health care professionals and facilities may encourage laboring women to adopt positions that women are most comfortable with [53].



Evidence-based practices have been found to have the potential to improve maternal care services.

#### **2.4.2 HUMAN RESOURCES FOR HEALTH:**

Human resources for maternity care are crucial for reduction of both maternal and neonatal morbidity and mortality. It has been discussed that among the key elements that has potential to reduce maternal deaths dramatically is the provision of skilled care at birth [48].

WHO defines a skilled birth attendant as someone “to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate post-natal period, and in the identification, management and referral of complications in women and newborns [54]. Unfortunately in The Gambia not all health care providers who attend to women are skilled, and it is not therefore uncommon to see an unskilled worker caring and managing women in labour. In The Gambian situation, the provision of adequate midwives and skilled nurses is crucial to the render of a quality maternity care services, particularly in the rural setting.

A well-managed nursing and midwifery workforce is a means to an end; it is not an end in itself. The purpose of a well-managed nursing and midwifery workforce is competent and motivated personnel who provide quality care, contributing to the provision of quality health services that are equitable and accessible [55]. As the provision of adequate midwifery and nursing workforce continue to be a challenge to The Gambia, our progress towards the achievement of our maternal and neonatal health targets will be so challenging. The ideal for every delivery or labour ward is to have the presence of a skilled birth attendant for every labour and delivery at all times.

Health professionals functioning as skilled attendants should be able to identify early signs of complications, and offer first-line emergency obstetric care (including emergency newborn care) when needed [56]. It has been asserted that it is a reasonable working hypothesis that, it is better for women and their newborns to have care from a skilled health care worker than from someone without skills [56]. That hypothesis gains strength from the experience of countries that have succeeded in reducing maternal mortality in both the developing and the developed world [56].

The issue of acute skilled staff shortage, the issue of attrition and the mal-distribution of skilled staff have been articulated in The Gambia Health Policy Framework [12]. The Human Resources for Health Strategic Plan of The Gambia [57], and The Gambia National Health Policy [60]. The strategic plan [57], indicate that a total number of nurses comprising of all categories in the health sector was 928, of which 165 were in the private sector. Of this total, 445 were professional nurses, and 318 were second level nurses. According to the document, a total requirement of 1 225 nurses is needed for the health sector, meaning that there was a deficit of 295 nurses at the time of document preparation. It also indicate that the target nurse population ratio required for The Gambia by the year 2020 with an estimated population of 2 182 020 would be 1:1000. If the ratio 1:1000 is the target, this translates into the total requirement of 2 182 nurses and therefore a deficit of 1 254 to reach this target. Unfortunately, the document is not explicit and specific to indicate the calculated shortage for midwives. The document [57] explains professional nurses as registered nurses and certified midwives. The second level nurses are the enrolled and community health nurses, but these cadre of nurses also do undergo midwifery training, and thus there category need to be made explicitly clear when such a cadre completes the midwifery training designed for the cadre.

#### **2.4.3 MEDICINES, EQUIPMENT AND SUPPLIES**

Availability of medicines, equipment and supplies is essential for the successful implementation of skilled care.

In many countries, midwives and nurses lack the training or autonomy to handle obstetric emergencies. They are also more likely than physicians to be operating in lower level facilities that lack equipment and supplies needed to treat emergencies [58]. Some midwives in The Gambia are trained to take care of emergency obstetric functions such as blood transfusion, manual removal of the placenta, administration of magnesium sulfate in a case of severe pre-eclampsia or eclampsia and induction of labour. It should be noted that all skilled attendants, even highly trained physicians, require the physical infrastructure, equipment, supplies, organization and support of a functioning health system to be effective [58].

Providing skilled attendants able to prevent, detect, and manage the major obstetric complications, together with the equipment, drugs, and other supplies essential for their effective management, is the single most important factor in preventing maternal deaths [5].

With the global phenomenon of increasing urbanization, many more women are delivering in obstetric facilities, whether they are having normal or complicated births [6]. There is a temptation to treat all births routinely with same high level of intervention required by those who experience complications. This unfortunately, has a wide range of negative effects, some of them with serious implications [6]. It is indicated that 57 percent of The Gambian population is now semi-urban based, and our delivery rate in the urban area will be higher, the main referral hospital registering the highest number of deliveries [8].

Important deficits were identified in infrastructure, human resources, availability of essential supplies to perform and availability to perform trauma, obstetric and general surgical procedures in a recent Gambian study [28]. Supplies are very critical to good maternity care services. For example, the economic transition of Mongolia led to the closure of maternities, cut-backs in emergency transport and dwindling hospital supplies [17].

Adequate equipment, drugs and supplies are absolutely necessary in the maternity ward to enable the health personnel to enhance skilled attendance during labour and delivery [8]. Inadequacies may be characterized by shortages in supplies, equipment, lack of trained personnel, incompetence of the available staff, or un-coordinated emergency services [5].

An operation room should in addition to cleanliness contain a minimum number of sterilized surgical equipment sets, sterilized linen, drugs, and equipment such as a laryngoscope, lamp, anaesthesia and suction machines, furniture and supplies [36]. Availability, utilization and quality of emergency obstetric care study conducted in The Gambia [10] cited unavailability of skilled personnel, lack of basic equipment, intermittent shortages of drugs and other medical supplies as the main challenges.

#### **2.4.4 SUPERVISION AND MONITORING**

Supervision is the analysis of performance of the people involved in the process of implementation. It is corrective, and therefore implies training. Synonymous terms are monitoring (or control) of performance.

Monitoring or evaluation on the other hand is an on-going activity (like a film), which accompanies the process of implementation of a program or project; it is concerned with organization, logistics, how and when tasks/activities are carried out [61].

A confidential enquiry into maternal deaths in Ghana [62] recommended that doctor's skills in obstetric care need to be improved through supportive supervision with on-the-job training and organization of continuing medical education.

In a survey conducted to assess the availability and use of emergency obstetric services in Kenya, Rwanda, Southern Sudan and Uganda [63] indicated a universal absence of supportive supervision.

Building effective working relationships at the local level, paying attention to norms of service, and effective external interaction are program characteristics under the direct control of managers [64].

A study conducted in Uganda [65] found out that the communities are of the view that health workers do ask them to pay unofficial fees, and so the community recommended that health workers should be closely supervised and monitored to help reduce the unacceptable practice. Supervision and monitoring has the potential to move things to the positive direction, which is essential for maternal and neonatal care services.

A project conducted in Mozambique [66] concluded that introducing the concept of supportive supervision and enabling frequent supervisory visits is a strategy to promote on-going training, support to management, and continuous quality improvement. The project [66] also had as part of its conclusions that: introducing a monitoring system with indicators improved the completion of maternity registers and together with the reactivation of the maternal mortality committee to audit maternal deaths, facility staff had opportunities to discuss case management of complications and their own indicators.

Supervision and monitoring can therefore motivate health workers to abide by the rules such as standards, protocols and guidelines for the improvement of quality maternal and neonatal care.

#### **2.4.5 PROTOCOLS AND GUIDELINES**

The Institute of Medicine (IOM) defined practice guidelines as “systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances [67].

Protocols are used for utilization review, for improving quality assurance, for reducing variation in clinical practice, for guiding data collection for better interpretation and management of the patient’s status, for activating alerts and reminders, and for improving decision support [67]. The benefits of protocols and guidelines are numerous, with the ultimate objective of improving quality of care.

A growth in the development of clinical guidelines has been prompted over recent years by the need to improve the quality of health care and to keep a tight grip on escalating costs [68].

Protocols and guidelines can enhance the availability of essential medicines, supplies and equipment; hence with the system in order, provision of required resources takes place.

Clinical practice guidelines are an established tool for quality improvement [69]. It has been stated that clinical practice guidelines are typically derived from population-based studies and perceived as limiting patients’ choice of advocating one appropriate course of action [69]. This is to state that some are of the opinion that most clinical guidelines are based on epidemiological trend of a condition of priority, and therefore not actually putting much consideration from the opinions of patients and clients.

Although there may be differing arguments [69, 70] on clinical guidelines, evidence-based clinical guidelines and protocols are essential for quality maternity care.

A study conducted in the United Kingdom [70] to investigate general practitioners’ attitudes to and behavior concerning clinical guidelines discussed that most respondents believed guidelines to be useful in delivering personal care flexibility and to be effective in improving patient care. But on the other hand, the most common negative attitudes were that guidelines should be based only on what has been scientifically proven and that doctors did not become general practitioner to practice “cookbook” medicine, a concern that guidelines may be used for performance-related pay and that they may diminish clinical freedom or stifle innovation.

Despite efforts to set standards, guidelines, or protocols, implementing them in practice has generally received little attention [71].

## **2.5 RATIONALE AND MOTIVATION FOR THE STUDY**

The reproductive and child health indicators for The Gambia (maternal mortality ratio of 400 deaths per 1 00 000 and neonatal mortality rate of 32 per 1 000 live births [7]) is not good enough if we are to achieve the millennium targets by 2015. Maternal mortality reduction is high on The Gambia's national health agenda and a priority for the Ministry of Health and Social Welfare. In The Gambia, there is paucity of information in relation to quality of intra-partum care, particularly in rural health facilities. An earlier study on quality of intra-partum care in The Gambia's main referral hospital indicated substandard care, and practices were not evidence-based. To our knowledge, no such studies have ever been conducted in rural health facilities.

The results of this study may have potential for the Ministry of Health and Social Welfare better focus on a reinforced strengthening of the Regional Health Care Delivery System, particularly rural major health centres which are the referral centres for both minor and village clinics.

Childbirth should take place in a setting with the necessary equipment, supplies, drugs, and support of a functioning health system, including transport and referral facilities for emergencies [23].

Another motivating factor for undertaking this study is the global concern for the reduction of both maternal, neonatal and child morbidity and mortality.

It has been stated that improved maternity care that is evidence-based and of quality has a high potential to reduce both maternal and neonatal mortality, thus improving the country's reproductive and child health indicators [7].

The other motivation for the conduct of this study was possibly to contribute to the body of knowledge in maternal and neonatal health, particularly at rural setting.

## **2.6 STUDY AREA**

The study was conducted in The Gambia, in the West African sub-region. The Gambia is bordered by the Republic of Senegal to the North, East and South.

With a current projected population of 1 705 000, the country is divided into six health administrative regions, including Lower River Region where Soma Major Health Centre is situated. The Lower River Region has an estimated population of 80 000.

The Gambia is characterized by its youthful and feminine nature as data indicates. Women of reproductive age (15-49 years) represent 49% of the female population.

The Lower River Region has four public health centres, two public village clinics, and two community-initiated clinics which are staffed with government-salaried nurses and midwives. Soma Major Health Centre is therefore amongst the four public health centres, but Soma is the referral point for all other facilities in the Health region. Thus, as a referral point for the satellite facilities, the majority of deliveries including high-risk or obstetric emergencies are referred here for possible management. As a referral point, one would expect that standard of care would be of a higher quality compared to other facilities in the Region.

Soma is the biggest facility in this region, and so it is the referral centre for the satellite facilities in the region. As a referral centre for satellite facilities, the majority of deliveries including high-risk or obstetric emergencies are referred here for possible management, or onward referral to hospital. An exception is a single public health facility (Karantaba) that refers all their obstetric emergencies directly to the country's main referral hospital at the capital. This is because there is a project interested in improvement of maternity care in the area where this facility is located, run by the Medical Research Council Field Station (Keneba) which provides the resources.

## **2.7 SELECTION OF STUDY AREA**

The study was conducted in Soma Major Health Centre, in the Lower River Region of The Gambia. The Region has an estimated population of 80 000 [9]. The facility is located in the biggest settlement of the region, Soma Town with a population of 11 050 according to the 2003 Population and Housing Census [9].

This major health centre was chosen for various reasons, which include:

1. Our increased interest in having facts on quality of labour and delivery care in a rural setting.
2. The amount of deliveries in Soma is expected to have a higher number of institutional deliveries, compared to other facilities in the region.
3. It is designed to be able to offer at least better basic emergency obstetric care services. Furthermore, by design, it is also expected to have a stationed medical doctor with surgery skills to be able to perform caesarean section, and able to perform blood transfusion, in addition to the seven signal functions (/comprehensive emergency obstetric care).
4. It is also expected to be a referral health centre for all other facilities within the region.

Therefore, our ultimate interest was to find out what is the quality of intra-partum care in Soma Major Health Centre as the only referral point for the satellite facilities in the health region.



## **CHAPTER 3: OBJECTIVES AND VARIABLES OF THE STUDY**

### **3.1 RESEARCH QUESTIONS:**

1. What is the quality of delivery care in Soma Major Health Centre delivery ward?
2. What are the perceptions of women who deliver in the facility on quality of delivery care?
3. What are the perceptions on quality of care of the health care providers who care for women in labour and delivery?

### **3.2 PURPOSE OF THE STUDY**

This is to assess the practices and quality of delivery care during normal birth [first stage of labour, second stage of labour, and third stage of labour, and immediate care of the newborn] in Soma Major Health Centre, The Gambia.

The study used WHO Technical Working Group's documented normal birth standards [6] in the development of a checklist for observation of intra-partum care practices.

### **3.3 OBJECTIVES**

1. To describe the practices and quality of care given to women during normal birth.
2. To describe the practices and quality of care given to women and their newborns during the immediate postpartum period.
3. To explore the views of women on the quality of care they receive during labour and delivery.
4. To explore the views of health care providers on quality of care they render to women during labour and child birth.

### **3.4 VARIABLES AND FACTORS**

These are the variables used during the non-participant observation of labour and delivery cases (the woman and the baby).

#### **3.4.1 WOMAN**

##### **3.4.1.1 HEALTH CENTRE ADMISSION PROCEDURES**

These concerns the socio-demographic characteristics of the research participants in labour and delivery; and also procedures like measurement of the pulse, temperature and blood pressure; listening to the foetal heart; assessment of progress of labour and foetal presentation; intravenous infusion in labour; interaction and communication (information sharing) between woman and the health care provider; and recording of findings in labour notes or partograph.

##### **3.4.1.2 MANAGEMENT OF FIRST STAGE OF LABOUR**

This is the use of the partograph; recording of foetal heart; vaginal examination; artificial rupture of membranes; mobility; oxytocin augmentation; bladder catheterization; taking and recording of pulse, temperature and blood pressure.

##### **3.4.1.3 MANGEMENT OF SECOND STAGE OF LABOUR**

This is the focus on labour position; giving of episiotomy; use of gloves and hygiene; and fundal pressure application.

##### **3.4.1.4 MANAGEMENT OF THIRD STAGE OF LABOUR**

This looked at examination of the placenta; manual exploration of the uterus; measurement of blood loss; giving of oxytocic prophylactics; and the active management of the third stage of labour; and taking and recording of pulse, temperature and blood pressure after delivery.

## **3.4.2 BABY**

### **3.4.2.1 RESUSCITATION MEASURES**

This is the assessment of baby's vitality (Apgar score); resuscitative measures taken if needed.

### **3.4.2.2 PREVENTION OF HYPOTHERMIA**

This looked at the cleaning, wrapping and positioning of the baby; skin-to-skin contact with the mother; wrapping and placing baby closest to the mother.

### **3.4.2.3 CORD AND EYE MANAGEMENT**

These are measures taken for the prevention of eye and cord infections.

### **3.4.2.4 WEIGHING OF BABY**

To check on whether the baby was weighed; and if weighed, was weight recorded.

## **CHAPTER 4: STUDY DESIGN**

This chapter describes the study design, sample size calculation, and gives a detailed description of the tools used in this study.

### **STUDY DESIGN**

The study was both a retrospective and prospective cross-sectional design combining both quantitative and qualitative methods.

Triangulation or the examination of the topic of interest using different techniques of investigation is a powerful way to assess validity of results [72].

A combination of both quantitative and qualitative methods was used. The combination was essential in order to enhance the validity of the study design. The method was a cross-sectional design and so data was collected during the prescribed study period. It is important to state that the Donabedian model [33] was employed in the assessment of quality care of laboring women. Furthermore, the WHO Technical Working Group Categorisation of normal Birth [6] was used as the “gold standard” in measuring the quality of care.

Qualitative method was applied to attempt to understand the views and opinions of health care providers on the quality of care they give to labouring women. Also qualitative inquiries were used to know the views and opinions women who deliver in the facility on quality of care they receive.

### **STUDY POPULATION**

Women in established normal labour and post-partum women admitted in the delivery ward during the period of July and December 2011, and health care providers who care for them during labour and delivery formed the study population.

## SAMPLE SIZE AND SELECTION

### QUANTITATIVE DATA

Sample size for the quantitative part of the study was calculated based on the assumption that 15 percent of all pregnant women will develop complications, and therefore will need obstetric care [49]. This means that women selected were expected to go through the process of normal labour, without any obstetric problems. The women selected were also pregnancies without complications during their pregnancy period before coming to the delivery ward.

The low delivery rate comparing to a hospital level had been put into consideration for sample size estimation.

As it is assumed that 85 percent of all pregnancies will be complication free, therefore a total of **101** were derived at in calculation to be the required sample based on the assumption shown below:

*Calculation of sample size based on the precision of the proportion:*

$$n = \frac{(1.96)^2}{d^2} \times p(1 - p)$$

n = the required sample size;

p = the expected proportion, where p = 0.85 (85 %);

d = level of confidence interval (this is the 95 % confidence interval) not to be wider than  $\pm d$ .

We would like to conclude that the true proportion was probably between 0.78 (78 %) and 0.92 (92 %), or we can say that we would like our 95 % confidence interval of the true proportion to be not wider than  $\pm 0.07$ .

The required sample size was calculated thus:

$$n = (1.96 \times 1.96 \times 0.85 \times 0.15) / (0.07 \times 0.07) = 0.09996 \approx 101$$

Study participants (laboring women) were selected using a systematic random sampling where every second eligible women in normal labour were recruited for inclusion after oral informed consent.

## QUALITATIVE DATA

The number chosen for the exit interview for post-partum mothers was fifteen, whereas for the focus group discussion for post-partum mothers was twenty. Participants were purposively selected to include women of varying parities and ethnic backgrounds.

For the health care providers, all health care providers working in the delivery ward were planned to be interviewed. However, one registered midwife who was on leave (an expatriate) was not accessible, and one nurse auxiliary was deliberately not included because of her being a newly-employed staff member without any theoretical and practical experience in delivery care.

Eleven (11) health care providers were interviewed, two of whom were nurse auxiliaries. Amongst the midwives interviewed, two had once worked in the delivery ward, but currently assigned to the reproductive and child health unit of the facility.

## INCLUSION CRITERIA

1. Full term pregnant women (37-42 weeks gestation) arriving in active labour within 4-8 cm dilatation who deliver between July and December 2011.
2. Health care providers in the delivery ward that attend to deliveries (trained or untrained).

## EXCLUSION CRITERIA

1. Full term pregnant women (37-42 weeks gestation) but not within 4-8 cm dilatation.
2. Women in labour but not willing to participate in the study.

3. Health care providers working in the delivery ward (trained or untrained) but not willing to participate (non-participant observation or for the exit/ in-depth interview).

## **RESEARCH ASSISTANTS**

Two research assistants were recruited before the start of the data collection. A senior community health nurse experienced in qualitative methods and a primary health care circuit supervisor who is also a community health nurse by profession were recruited. They were both introduced to the study and the study tools through some training before the start of their tasks.

## **4.7 DATA COLLECTION**

### **4.7.1 PLAN FOR DATA COLLECTION**

This helped the Principal Investigator (PI) to have a clear focus on the various tasks to be executed.

The plan for data collection assisted in the organization and co-ordination of both human and natural resources so as to minimize wastage and delays that might have resulted from improper planning. Two stages to the data collection process occurred: data collection methods, and data processing and analysis.

Efficient planning before a study is essential for a successful implementation of a study as planned. Stationery materials were provided before the start of the study. Data collection instruments such as questionnaires and checklists were printed in sufficient quantity before the commencement of the study.

#### **4.7.1.1 DATA COLLECTION TOOLS**

The instruments were developed in consultation with both the main supervisor and the co-supervisor. The instruments used had both quantitative and qualitative components.

### **1.1 NON-PARTICIPANT OBSERVATION OF NORMAL LABOUR CHECK-LIST GUIDE:**

The instrument for the non-participant observation aimed to collect information on practices performed on laboring women from admission to discharge. This was compared with the World Health Organization Technical Working Group's categorization on Normal Birth [6]:

- A. Practices which are demonstrably useful and should be encouraged.
- B. Practices which are clearly harmful or ineffective and should be eliminated.
- C. Practices for which insufficient evidence exists to support a clear recommendation and which should be used with caution while further research clarifies the issue.
- D. Practices which are frequently used inappropriately.

The questionnaire (checklist) tool has a “Yes” or “No” choices, denoting presence or absence of a variable respectively.

However, the study did not include all the World health Organization recommended practices for normal birth.

Practices not included in the non-participant observation checklist were shown below in Table 3:

**Table 3: WHO Classification of practices not included by reasons of exclusion:**

[Adapted to the delivery ward circumstances]

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- 1. Practices preceding arrival at the delivery ward:**  
Respecting choice of place for delivery; having had a birth plan; risk assessment of pregnancy during antenatal care; providing care in labour and delivery at minor health centre or village clinic level.
- 2. Practices subjected to observer subjectivity:**  
Empathetic support: by health care providers during labour and child birth.
- 3. Practices not offered at the delivery ward:**  
Pubic shaving; enemas; rectal examination; use of x-ray pelvimetry; non-invasive; non-pharmacological methods of pain relief during labour; nipple stimulation to increase uterine contractions; use of systemic agents (e.g. pethidine; pain control by epidural analgesia; electronic foetal heart monitoring; foetal scalp blood examination; use of oral tablets of ergometrine in the third stage of labour; routine lavage of the uterus after delivery; wearing masks and the sterile use of gowns during labour attendance; routine prophylactic insertion of intravenous canula; bathing of the new born in the delivery ward.



#### **4. Practices difficult to assess:**

Sustained direct bearing-down efforts; manoeuvres related to protecting the perineum.

### **1.2 SERVICE DATA FOR 2010 COLLECTION GUIDE:**

Apart from the observation checklist for women in normal labour, service data for 2010 was also collected (quantitative data). This guide collected data on: total deliveries; total caesarean sections; total vacuum deliveries; total live births; total stillbirths; total assisted breech deliveries; total maternal deaths and causes; total referrals “in” and “out”; total maternity admissions; and completeness of admission registers. Comments were also provided.

### **1.3 IN-DEPTH INTERVIEW GUIDE FOR HEALTH CARE PROVIDERS:**

The in-depth interview for health care providers was to know what were their views and perceptions of quality of care and the use of evidence-based practices; and also their suggestive recommendations for improvement.

### **1.4 EXIT INTERVIEW GUIDE FOR POST-PARTUM WOMEN:**

The women were asked about the care they receive, perception on quality of care; on the environment of the delivery ward; and on the health care providers; and what will be their recommendations for better quality of care for women who come for labour and delivery care.

### **1.5 FOCUS GROUP DISCUSSION GUIDE:**

Just like the exit interviews for women, the women were asked about the care they receive, perception on quality of care; on the environment of the delivery ward; and on the health care providers; and what will be their recommendations for better quality of care for women who come for labour and delivery care.

We wanted to have as much as possible a resourceful data that will contribute to the improvement of quality of labour and delivery care, hence the use of both exit interviews and focus group discussions.

### **1.6 STAFFING AUDIT GUIDE:**

A staffing audit guide was used to compare available staff against what is the supposed recommended number for each cadre of staff, to enable us identify any staffing gaps, particularly for nurses and midwives for labour and delivery care. The MOHSW Human Resources for Health Plans was used as the proxy in finding out for any staffing gaps.

### **1.7 WALK-THROUGH TOOL:**

A tool called the walk-through-tool (WTT) with some modifications, was also used for the assessment of the various service areas of the facility that have a link with labour and delivery, with the maternity unit included in this assessment as an essential part of structure in assessing quality of obstetric care. The other service areas such as the post-natal, general outpatient, laboratory and pharmacy units were included focusing on supplies, equipment, key medicines, completeness of records, and cleanliness. The tool looks at the outpatient, delivery ward/scrub room, operation theatre, pharmacy unit and laboratory/blood bank and sterilization facilities. As mentioned earlier, this tool was used to aid assessment of structure, as an essential component in describing quality of obstetric care. The tool also propelled the researcher to observe areas such as cleanliness of the service areas, infection prevention practices, and inventory of supplies, requisition and replenishment modalities; equipment and medicines; and also attempted to observe the record completeness in the service areas. The tool is found in the Annex, with some modifications. As this was a rapid assessment tool, a “yes” or “no” matrix was used for availability or non-availability of items of interest, and some quantification of selected items.

#### **4.7.1.2 DATA COLLECTION METHODS**

Data was collected by the Principal Investigator, with the support of the research assistants. For the observation check-list for normal labour, the data was collected when the women in labour were still admitted in the facility for labour and delivery. Service data for 2010 was collected using maternity unit service data registers.

The post-partum women for the exit interview were interviewed either when already discharged from facility and ready to go home, or at the Reproductive and Child Health Clinic of the facility. The interview of health care providers took place at the tail end of the study period.

For the focus group discussion, twenty post-partum women were invited to the session through the recruitment of one of the research assistants for women from the surrounding villages including Soma Town and some from the ongoing Reproductive and Child Health Clinic session. The women for the exit interview and focus group discussion were women who were not part of the non-participant observation of labour and delivery.

Health care service providers were invited to an in-depth interview on one-on-one basis.

The interview of health care providers (in-depth) took place at the tail end of the study period. For the focus group discussion, twenty post-partum women were invited to the session

through the recruitment of one of the research assistants for women from the surrounding villages including Soma Town and some from the ongoing Reproductive and Child Health Clinic session. The women for the exit interview and focus group discussion were women who were not part of the non-participant observation of labour and delivery.

Two main data collection techniques were used in this study: in-depth interview and non-participant observation (of women in labour).

A walk-through-tool (WTT) was also used for the assessment of the various service areas of the facility that have a link with labour and delivery, with the maternity unit included in this assessment as an essential part of structure in assessing quality of obstetric care. The other service areas such as the post-natal, general out-patient, laboratory and pharmacy units were included focusing on supplies, equipment, key medicines, completeness of records, and cleanliness. The tool looks at the outpatient, delivery ward/scrub room, operation theatre, pharmacy unit and laboratory/blood bank and sterilization facilities. As mentioned earlier, this tool was used to aid assessment of structure, as an essential component in describing quality of obstetric care. The tool also propelled the researcher to observe areas such as cleanliness of the service areas, infection prevention practices, and inventory of supplies, requisition and replenishment modalities; equipment and medicines; and also attempted to observe the record completeness in the service areas. The tool is found in the Annex, with some modifications. As this was a rapid assessment tool, a “yes” or “no” matrix was used for availability or non-availability of items of interest, and some quantification of selected items.

For decision on cleanliness status of service units assessed, the presence of dusty tables, floors, trolleys or couches, and presence of human fluids such as blood on the floor which have not been cleaned due to unavailability of a cleaner at time of assessment, or presence of cob-webs on the walls or ceiling of the service area room. Infection control will help interrupt the cycle of transmission; hence transmission of diseases will greatly decrease. Proper infection control helps protect both the health worker, the laboring woman, and even the escort or relative of the woman who enters the delivery ward. Any presence of one of the above indicators was regarded as cleanliness unsatisfactory, after mutual consensus with staff member in-charge of unit at time of assessment. The rating was therefore only satisfactory or unsatisfactory. The assessments were conducted in the mornings at a time one would have expected that cleaning had been done before the start of the day’s activities.

A staffing audit was also conducted for staffs that care for women in labour. [The WTT assessment and staffing audit, health care provider in-depth interview, exit interview and focus group discussion of post-partum women are discussed in the qualitative component of the study].

#### **4.7.1.2.1 IN-DEPTH INTERVIEWS**

An interview guide was first prepared, that listed a set of issues that were to be explored during the interview. This guide served as a checklist and helped to ensure that uniform data were collected from all the interviewees. We wanted to have as much as possible a resourceful data that will contribute to the improvement of quality of labour and delivery care.

Women's views were explored using the different interview guides: one for the exit interview, the other for the focus group discussion. The women were asked about the care they receive, perception on quality of care; on the environment of the delivery ward; and on the health care providers; and what will be their recommendations for better quality of care for women who come for labour and delivery care.

The in-depth interview for health care providers was to know what are their views and perceptions of quality of care and the use of evidence-based practices; and also their suggestive recommendations for improvement.

#### **4.7.1.2.2 NON-PARTICIPANT OBSERVATION**

In this technique, we recruited, watched and recorded the maternity routines without direct participation in the care of the research participants. The non-participant observation data collection tool was used to generate information related to the interaction between the women and the health care providers, interventions during childbirth and the frequency of these interventions. A **99-item** checklist was used during the observation that contained guidelines related to: socio-demographic characteristics; maternity admission procedures; management of first, second and third stage of labour; immediate care of the newborn. Bathing of the newborn was not assessed in this study.

The researcher was stationed in the delivery ward without interfering with the care being provided to the research participants in labour.

#### **DATA COLLECTION PROCESS:**

The non-participant observation was conducted between July and December 2011. The method was used on laboring women admitted at the delivery ward of the health centre during the study period. Health care providers were also interviewed by the PI on one-on-one basis.

## DATA HANDLING

### 4.8.2 DATA PROCESSING AND ANALYSIS

Generated raw data was only accessible to the Principal Investigator for purpose of confidentiality. After collection of quantitative data, it was first checked for accuracy and clarity before final safe keeping. Each individual case was given a code number for ease of sorting.

Individual in-depth interviews were scripted according to cadre of health care provider. The exit interviews were also scripted using age and parity as code.

The focus group discussion was both scripted and recorded on numbered tapes word-to-word.

All these records were entirely under the custody of the PI; they were kept under lock and key.

As both quantitative and qualitative data were collected, they were analyzed differently.

The quantitative data was analyzed using a statistical package called Predictive Analytics Software (PASW) version 18. The raw data was entered daily by the principal investigator after cross-checking.

Frequency tables and cross-tabulation were used to present the quantitative results. However, attempts were also made to find if there is an association between parity of women and health care provider's decision to perform episiotomy using the chi-square test.

The qualitative data was transcribed verbatim, typed and stored safely. Data analysis for the qualitative data started at the end of data collection. Data was categorized into themes and sub-themes. The qualitative data was analyzed manually. Simple content analyses according to emerging or frequent themes were used to analyze the qualitative data.

The room-by-room walk-through tool was used to assess the facility service areas. In addition to its benefits to emergency obstetric care, the tool according to its designers may help develop generally stronger and more efficient health care delivery services that affect not only obstetric outcomes, but also other medical emergencies that depend on common systems such as pharmacy, laboratory, infection prevention and surgical services.

## **4.9 PILOTING**

Piloting was meant to check the applicability and how user-friendly were the data collection instrument prior to the actual study. The non-participant observation checklist was pretested on laboring women that have the same characteristics as the intended research participants of the study. The pilot site was not the same site and Health Region as the study site. The pretesting and review of the data collection instrument helped to improve on the acceptability, applicability, clarity and user-friendliness of the instrument. The pretesting of the tool was conducted in a totally different Health Region from the Region where the actual study site is located.

## **4.10 ETHICAL CONSIDERATIONS**

It is the responsibility of the researcher to protect the dignity and privacy of the research participants at all times. The reason for this is that the researcher's primary responsibility is the research subjects and the confidentiality and privacy promised.

A courtesy call was made to both the Regional Health Office at Mansakonko and the Health facility where the study took place before start of the study. All health care providers in this facility were informed about the study, the researcher and his team of research assistants by the officer in-charge of the study facility. The traditional district administrative Chief was also informed of the study, for his support.

Confidentiality and privacy of study participants were maintained during the study period. For anonymity, code numbers were used instead of names of study participants. Furthermore data generated was under lock and key, under the custody of the Principal Investigator. Participation by informed consent was applied, in which the necessary information about the study, roles, duration and benefits had been explained to all potential participants in a language they understood. The participants were also informed that each participant who consented could withdraw at any stage of the process if they wish to, and that their withdrawal would not in any way affect the quality of health care they receive in the facility (i.e. women participants).

For women participants, it was recommended that oral consent be given, for the reason being that in The Gambian cultural context, signing a document as consent may seem as self-incrimination or otherwise. Therefore, oral consent was sought. Trust was therefore the working principle.

The same modality was used for the exit interview of post-partum women who had been discharged after delivery (i.e. those women, whose deliveries were not observed, meaning those not part of the non-participant observation process).

Information leaflets were given to health care providers for them to read; and then written consent was signed.

#### **4.11 ETHICAL APPROVAL:**

Approval was granted by both the Ethical Review Committee of Norway, and The Joint Gambia Government and Medical Research Council Ethics Committee before the commencement of the study for the entire study. The Gambia Ministry of Health and Social Welfare through the Director of Health Services acknowledged the conduct of this study, using official channels of communication to relevant partners to the study.

## 5.0 CHAPTER 5: SUMMARY OF MAIN FINDINGS

The detailed findings of quantitative and qualitative components of this study are discussed separately (Chapter 7 and Chapter 8). What is presented in this chapter is only a summary of findings.

### 5.1 Labour and delivery practices compared to evidence-based labour and delivery practices: Normal birth in a Gambian rural Major Health Centre:

What is presented in this chapter is only a summary of findings. The detailed findings of the quantitative component of this study are discussed in Chapter 7.

The results of the study show that practices which are demonstrable useful and should be encouraged are uncommon: use of partograph throughout labour was only 13 [12.9 %], foetal heart monitoring on admission only was higher [74 (73 %)], whereas that of monitoring every four hours was only observed in 24 [24 %]; women were allowed to take oral fluids in 50 [49] of the women; all women [101 (100 %)] admitted in labour were instructed to be in lithotomy position during the time of delivery. To be allowed movement up and about was observed in 71 [70 %] of the women. This means there was no impressive freedom in position and movement throughout labour as recommended.

In 100 [99 %] of the deliveries observed the instruments used were regarded unsterile, as health care provider uses most of the time bare hands to pick them from a congested autoclave. Routine examination of the placenta and membranes to confirm that there were no retained products of conception was noted in only 20 [19 %] of the women.

Practices which are clearly harmful or ineffective and should be eliminated were common: routine use of supine position was observed in 101 [100 %] of the women; and the post-delivery manual exploration of the uterus was high [n=81, 80 %].

The study indicated that an assessment of vital signs of the women was not impressive since taking and recording of pulse does not seem to be a routine in this facility. Pulse was taken and recorded in only 9 [9 %] of the women; at subsequent assessment, pulse taking and recording was observed in only 14 [14 %] of the women. Taking of temperature and recording was observed in 87 [86 %] of the women on admission; on subsequent assessment, there was no difference, 88 [87 %] of the women had temperature taken and recorded. Taking of blood pressure and recording was observed in all [101] of the women on admission; on subsequent assessment, there was 99 [98%] of the women whose blood pressures were taken and recorded.



Although information giving to mother on stage of labour [n=101, 81], and information to mother about vaginal examination to be performed [n=101, 77] seem to be high, unfortunately information on the results of the examination at time of admission was very low [n=101, 3].

Incomplete delivery set has been found to be common in this labour, since only 2 [2 %] of the delivery sets had been found to be complete. But assembly of the delivery set before delivery starts has been found to be high [n=84, 83 %].

There were poor aseptic measures and therefore the sterility of scissors used to even cut the baby's cord has to be questioned. Baby drying with warm towels or clothes before wrapping is common [n=97, 96 %]. Furthermore, 99 [98 %] of the babies had been wrapped in dry towels or clothes after being dried. This practice on the newborn denotes that the prevention of hypothermia in the newborn was very good, as it is a practice which is demonstrably useful and should be encouraged. Although immediate bathing of the baby has not been observed in this facility, which could be regarded as a positive step for neonatal survival, but surprisingly, only 15 [n=101] of the women had their babies placed on the abdomen of the mother immediately after birth. Incomprehensibly, routine examination of the newborn for any abnormality was not a culture in this facility: of all the deliveries observed, only 4 [n=101] babies had been routinely observed and examined for any abnormality. It has been observed, although not assessed in this study, breastfeeding of the newborn is being encouraged in this facility, although health care providers seem not to adhere to supporting the women to give the breast within at least one hour of delivery.

Although not part of WHO recommended evidence-based practices categorization for intrapartum care, it is a national recommendation according to policy, and it is also a strong recommended practice in similar WHO documents [73, 74]; to instill tetracycline eye ointment or any recommended antimicrobial in both eyes of the newborn immediately after birth as prophylaxis. Out of the 101 deliveries observed, only one (1) baby had tetracycline instilled in both eyes.

The Ministry of Health and Social Welfare under the auspices of Reproductive and Child Health Programme Unit of The Gambia had finalized a National Maternity Care Guidelines and Service delivery Standards since April 2010, this national document could not be found in this facility delivery ward or with any staff member. It could be stated that there is lack of protocols and guidelines on normal delivery, absence of active supportive supervision, with acute staff shortage especially in the afternoon and night shifts.

In the overall, it may be concluded that most practices in this delivery ward are not evidence-based, and care is substandard.

## **5.2 Views and perceptions of health care providers and women on quality of intra-partum care in a Gambian rural Major Health Centre:**

What is presented in this chapter is only a summary of findings. The detailed findings of the qualitative component of this study are discussed in Chapter 8.

The results of both quantitative and qualitative data show some inconsistencies between actual practices during intra-partum care and views of health care providers about failure to apply evidence-based intra-partum care.

The study revealed that most of the health care providers were aware of some of the evidence-based recommendations, but not practicing them as recommended. Most of the health care providers are not aware of the presence of The Gambia Maternity Care Guidelines, and so the document is not available in the facility's delivery ward or anywhere in the facility. Health care providers therefore give care based on experience and knowledge background, as the qualitative data indicates.

The high awareness level by most health care providers on evidence-based intra-partum care practices, which are not translated into actual practice, may also be partly due to the inadequate monitoring and supervision, and the challenges they face on the availability of the required resources for conduct of such practices.

Health care providers' failure to adhere to infection control practices and poor interpersonal relationships in this study may partly be due to inadequate monitoring and supervision.

In-depth interviews with health care providers show that harmful and sometimes uncomfortable practices were frequent even though evidence does not suggest their benefits. Lithotomy position is very frequent in women admitted for labour and delivery. Some practices which are clearly supported with evidence were infrequently applied by health care providers. Support during labour and delivery, and good inter-personal relationships were infrequent. Women need companionship at birth, as this may help allay fears and contribute towards reduction of pain during labour and delivery. Health care providers seem to be willing to give companionship at birth or allow relatives to give social support and birth

companionship, but they have concerns for the space of the delivery ward, which they viewed need some adjustment to help enhance privacy and confidentiality.

Findings of the study indicated areas in health centre-based intra-partum care that need special attention according to testimonies of women. These areas include the staff attitude, interpersonal relationship, cleanliness of the delivery ward, availability of supplies, equipment and medicines, which are essential for quality intra-partum care. Also it was concern of the women that serious monitoring of women in labour and a functioning operation theatre is fixed to save the lives of women and their babies.

Some women viewed that health care workers need to redouble their efforts to treat all women in dignity and respect, irrespective of ethnicity, status or religious background. Concern has also been raised by women on staffing of the delivery ward; some are of the view that the number of midwives in the delivery ward particularly during night shifts is not sufficient.

Women need a variety of services that would help reduce their travel to another level of care. Interestingly, training needs have been pointed by some health care providers and women, particularly for nurse auxiliaries as a way to improve competence in labour and delivery care.

## **6.0 CHAPTER 6: LIMITATIONS, VALIDITY AND RELIABILITY OF THE STUDY:**

### **6.1 LIMITATIONS**

Although the Ministry of Health and Social Welfare has Maternity Care Guidelines, unfortunately this national document is not available as point of reference by health care providers during practice of intra-partum care. The World Health Organization Recommended Guidelines [6] were used in this study as the best available guide, but putting the country's situation into consideration. In addition, this document [6] gave a categorization of practices based on evidence, and therefore helped in the design of the checklist for the non-participant observation of laboring women.

This study selected only one rural major health centre of the country and therefore results may not be representative of all rural major health centres in the country.

As the sample size for the quantitative data may be small (101), in calculating it, the delivery rate of the facility per month was put into consideration. Therefore, the results of the findings may not be representative of all major health centres in the country and also other health centres in both the entire country and the health centres within the Lower River Region where the study facility is located.

As a skilled health care provider by profession, principal investigator sometimes gets involved in the care of laboring women with obstetric emergencies as a moral responsibility, although such women were not part of the research participants. The involvement may also have influenced in how some of the health care providers' practice in the care of women in labour, thus introducing some biases. In addition, the sample size (n=101 women) was small.

Due to the low delivery rate in the facility, only one focus group discussion was conducted, which could be regarded as a limitation in the qualitative assessment. As both principal investigator and the team of research assistants are health care providers by profession, the conduct of interviews and discussions may have introduced some biases, thus affecting the validity and reliability of the results.

The WTT assessment may be subjective in nature at some point, and this is the major limitation, but has potential to surface useful pointers for action, with the ultimate view to enhance quality intra-partum care.

## **6.2 VALIDITY AND RELIABILITY**

We used a combination of both quantitative and qualitative methods in a bid to get the varied perspectives of the subject under study. The combination of methods could also be seen as strength in this study in a bid to enhance the validity and reliability of study findings. The use of different methods (triangulation) has been found to be a powerful way to assess validity of results, thus the combination of methods may have helped determine to what extent the different methods arrive at converging findings.

The interviews and discussions with both post-partum women and health care providers in addition to non-participant observation of delivery care practices had the advantage to complement each other to make findings as rich as possible.

Furthermore, the training of experienced research assistants on the raw data generation tools and instruments, the pilot testing of the observation checklist and continuous check on data collected also helped to enhance the validity and reliability of the findings of the study.

The presence of an observer (non-participant observation) may make health care providers to change the way they work, possibly for the better, which may not be the real normal reflection when caring for women in labour. Although observation on a labouring woman may not bring any physical harm to the woman by the researcher, but her psycho-social and emotional well-being need to be put into account-the principle of non-maleficence: “first, do no harm”.

Both the exit interviews and focus group discussion were conducted by health professionals (researcher and research assistants), and these were conducted within the premises of the

study site, may also have introduced some biases in the results, hence the environment may have limited some of the women participants to express their true feelings about care they received. In addition, most of the interviews were conducted during the country's party political campaign period for an up-coming Presidential Election, and with the reassurance to women of the activity's non-link to any party political agenda, yet still, some women may still have reservations to truly express their feelings on the care received, thus probably affecting the validity and reliability of the results. On the other hand, the selection of women who were not part of the non-participant observation for the exit interviews and the focus group discussion could be seen as a positive strength in enhancing the validity, reliability and trustworthiness of the findings.

To enhance validity, reliability and trustworthiness of the study instruments and findings, they were reviewed several times for their clarity, and during exit interviews and focus group discussion, women participants were communicated to in the language they were comfortable with, hence researcher and team of research assistance could speak several languages of the locality. This was done to ensure that women participants do not experience difficulties in understanding and responding to questions during interviews and discussions. The in-depth interview questionnaires for health care providers were also reviewed for their clarity, to avoid ambiguous technical terms.

## **7.0 CHAPTER 7: LABOUR AND DELIVERY PRACTICES COMPARED TO EVIDENCE-BASED LABOUR AND DELIVERY PRACTICES: NORMAL BIRTH IN A GAMBIAN RURAL MAJOR HEALTH CENTRE:**

### **7.1 INTRODUCTION**

The health of women and children remain to be major challenges in the world, particularly in developing countries. Most of maternal deaths are concentrated in sub-Saharan Africa and Southern Asia. Globally, every year, 358 000 women die due to pregnancy and childbirth-related complications [2]. It has also been stated that every year, 2.6 million children are stillborn, and a further 8.1 million die before their fifth birthday, including 3.3 million babies in the first month of life [2]. Improving maternal and child health are amongst the main global health challenges and reduction of maternal mortality ratio by three-quarters and reduction of child mortality by two-thirds between 1990 and 2015 are the targets of the millennium development goals 5 and 4 [1]. It has also been stated that the highest levels of under-five mortality continue to be found in sub-Saharan Africa, where one in eight children die before the age of five, nearly twice the average in developing regions overall and around 18 times the average in developed regions [1]. There is therefore a scientific justification, backed by evidence, that there is need to focus more attention in efforts to reduce both maternal and child morbidities and mortalities.

It has been noted that interventions that work for women and children include delivering high-quality services and packages of interventions in a continuum of care and quality skilled care for women and newborns during and after pregnancy and childbirth [3]. It has been proven that rendering quality maternity care means providing care that is evidence-based, and practices that have proven to be effective need to be encouraged. The use of evidence-based maternity care in normal birth encouraged the adoption of practices of proven benefits and the elimination of ineffective and sometimes harmful practices [6].

Evidence-based medicine is defined as the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients [4].

It has been observed that not much attention has been given to evaluating the quality and practices of intra-partum care, particularly for normal birth. The application of evidence-based intra-partum care practices has proven to enhance quality of care and the reduction of both maternal and neonatal mortalities and morbidities. Six evidence-based care practices promote physiological birth: avoiding medically unnecessary induction of labour, allowing freedom of movement for the laboring woman, providing continuous labour support, avoiding routine interventions, encouraging spontaneous pushing in non-supine positions, and keeping mothers and babies together after birth without restrictions on breastfeeding [51].

To reduce maternal deaths dramatically, all women need access to high quality delivery care with at least three key elements: skilled care at birth, emergency obstetric care in case of complications and a functioning referral system, which ensures access to emergency care, if needed [48]. Studies have shown that around 15% of live births are likely to need emergency obstetric care and caesarean section may be required in 5-15% of births [49].

In The Gambia, reliable data indicate that both maternal and child mortality figures have reduced [7] (maternal mortality ratio: 400 per 100 000 live births; under five mortality rate: 103 per 1 000 live births), but this is still not good enough if we are to reach the target by 2015. The traditional causes of maternal deaths and child deaths remain the same.

As the present study was to assess the quality of intra-partum care in Soma Major Health Centre, in the overall, the quantitative component of the study attempts to address the following research question:

1. What is the quality of delivery care in Soma Major Health Centre delivery ward?



**7.2 TABLE 4: MATERNITY INDICATORS OF SOMA MAJOR HEALTH CENTRE FOR THE YEAR 2010:**

<b>Task:</b>	<b>Total number:</b>	<b>Comments:</b>
Total deliveries	<b>744</b>	
Caesarean sections	<b>nil</b>	Operation theatre is non-functional
Vacuum deliveries	<b>nil</b>	No vacuum set for more than one year
Total Live births	<b>697</b>	nil
Still births (recorded)	<b>35</b>	Out of which 17 were fresh still births, a still birth rate of 4.7%
<b>Assisted breech deliveries</b>	<b>24</b>	
<b>Total maternal deaths</b>	<b>4</b>	2 due to severe anaemia; 1 due to severe malaria, and 1 due to post-partum bleeding
Labour referrals “out”	<b>151</b>	
Labour referrals “in”	<b>77</b>	
Maternity admissions	<b>290</b>	
Completeness of admission registers	<b>40 % [n=290]</b>	<b>Out of the 290 admissions, outcome of admissions was not indicated in 117 admissions.</b>

**Data From: Maternity Unit Service Data Registers, 2010**

According to the records, cause of referrals “out” include: delayed first stage of labour, delayed second stage of labour, severe anaemia, antepartum haemorrhage, postpartum haemorrhage, pre-eclampsia and eclampsia, prolonged labour and puerperal sepsis. These referrals were largely sent to AFPRC Hospital (Farrafenni Hospital), but some to Royal Victoria Teaching Hospital or to Bansang Hospital.

The cause of referrals “in” is not different from the cause of referrals “out”, which include: delayed first stage of labour, delayed second stage of labour, severe anaemia, antepartum haemorrhage, postpartum haemorrhage, pre-eclampsia and eclampsia, placenta praevia,

abruption placenta, abortion and puerperal sepsis. The unavailability of comprehensive obstetric care services may be explained by the high referral (151) of women to higher facilities where such services are provided.

### **7.2.1 COMPLETENESS OF RECORDS:**

Rigorous search on completeness of records was not done in this study. The facilities and infrastructure for record-keeping seem non-existent. Admission records which include delivery records are filed in a carton that was not safely kept. Delivery notes sometimes are not stapled together nor folders for the notes means that it is not uncommon to see several sheets of paper for one woman heaped in a carton, not stapled together for the particular woman. It may therefore be concluded that there are no files available for each delivery note or admission notes that would have at least improved the storage of such records for future reference. Therefore, to search for a record a year ago became impossible. Such keeping of records has potential for gross loss of essential information of patients and clients. As indicated above (**Table 4**) completeness of admission registers were given, but that for admission or delivery notes were not indicated.

### **7.3 DATA COLLECTION TOOLS**

The instrument for the non-participant observation aimed to collect information on practices performed on laboring women from admission to discharge. This was compared with the World Health Organization Technical Working Group's categorization on Normal Birth [6].

In this technique, we recruited, watched and recorded the maternity routines without direct participation in the care of the research participants. The non-participant observation data collection tool was used to generate information related to the interaction between the women and the health care providers, interventions during childbirth and the frequency of these interventions. A **99-item** checklist was used during the observation that contained guidelines related to: socio-demographic characteristics; maternity admission procedures; management of first, second and third stage of labour; immediate care of the newborn. Bathing of the newborn was not assessed in this study.

The researcher was stationed in the delivery ward without interfering with the care being provided to the research participants in labour.

The questionnaire (checklist) tool has a “Yes” or “No” choices, denoting presence or absence of a variable respectively.

Although the tool incorporated an interview guide which aimed to explore women’s views and perceptions on the care they received during labour, women’s interviews and focus group discussion did not recruit women whose labours were observed in the non-participant observation.

However, the study did not include all the World health Organization recommended practices for normal birth.

#### **7.4 DATA COLLECTION METHOD:**

This component of the study was both a prospective and retrospective, cross-sectional study design using quantitative method, conducted in Soma Major Health Centre. Of the 101 women selected randomly, non-participant observation was conducted from admission through delivery using a check-list.

#### **7.5 RESULTS:**

##### **7.5.1 DEMOGRAPHIC CHARACTERISTICS:**

Forty-three (43) primi-parous and fifty-eight (58) multiparous women were recruited for the labour observation part of the study. Their ages ranged from thirteen (13) to forty (40) years, mean age of 23.9 with a standard deviation of 6.2. A total of 5 women were excluded from the study because problems were discovered, amongst these 2 were referred to hospital, whereas 3 were discovered to be multiple pregnancies in labour, one of whom had macerated stillbirths.

Parity of women ranged from zero to eleven children, with mean of two births.

More than half (69%) of the women did not have formal education or had not been to school at all. Out of the one hundred and one women, 94% are married, while 7% are single. Of these married women, 89% are engaged in full time household work, very few (4%) are civil servants, and one woman does some petty trading. Others are either students or only at home in the care of parents.

Looking at the bringing along of antenatal cards for labour, it may be worth noting that, of the one hundred and one women whose labours were observed, only two women did not come along with their antenatal cards. Bringing of antenatal card along to delivery room is therefore found to be very high in this facility.

#### **7.6 NORMAL BIRTH DEFINED:**

In this study normal birth is defined as labour that is spontaneous in onset, low-risk at the start of labour and remaining so throughout labour and delivery. The infant is born spontaneously in the vertex position between 37 and 42 completed weeks of pregnancy. The World Health Organization definition of normal birth has been used [6].

#### **7.7 DATA PROCESSING AND ANALYSIS**

Generated data was only accessible to the Principal Investigator for purpose of confidentiality. After collection of quantitative data, it was first checked for accuracy and clarity before final safe keeping. Each individual case was given a code number for ease of sorting. All records were entirely under the custody of the PI; they were kept under lock and key.

The quantitative data was analyzed using a statistical package called Predictive Analytics Software (PASW) version 18. The raw data was entered daily by the PI after cross-checking.

Frequency tables and cross-tabulation were used to present the quantitative results. However, attempts were also made to find if there is an association between cadre of health care provider and the performance of certain tasks using the chi-square test. These were done due to the categorical nature of the study variables.

**7.7.1 TABLE 5: Vital signs monitoring and recording in labour:**

	On admission		Subsequent	
	Taken	Recorded	Taken	Recorded
	[n=101]	[n=101]	[n=101]	[n=101]
Blood pressure <sup>1</sup>	101 (100%)	101 (100%)	99 (98%)	99 (98%)
Pulse <sup>1</sup>	9 (9%)	9 (9)	14 (14%)	14 (14%)
Temperature <sup>1</sup>	87 (86%)	87 (86)	88 (87%)	88 (87%)
Foetal Heart <sup>2</sup>	100 (99%)	100 (99%)	91 (90%)	91 (90%)

<sup>1</sup>subsequent here means after delivery of the baby.

<sup>2</sup>subsequent here means foetal heart monitored with foetal stethoscope every 4 hours.

For cervical dilatation on admission, minimum cervical dilatation assessed on admission was 4 cm, and the maximum on admission was 8 cm, with a mean of 5.7, and a standard deviation of 1.487. Thirty one (31) of the women observed came in at 4cm cervical dilatation, 17 at 5cm, 24 at 6cm, 9 at 7cm, and 20 women admitted in labour at 8cm cervical dilatation [n=101].

**7.7.2 TABLE 6: Observed practices during first stage of labour:**

	[n=101]	Percentage (%)
Partograph initiated <sup>1</sup>	<b>82</b>	<b>81%</b>
Partograph used throughout labour and delivery	<b>13</b>	<b>13%</b>
Allowed oral fluids <sup>1</sup>	<b>50</b>	<b>49%</b>
Allowed movement <sup>1</sup> up and about in the ward	<b>71</b>	<b>70%</b>
Gave intravenous fluids <sup>2</sup>	<b>20</b>	<b>19%</b>
Artificial rupture of membranes on no indication <sup>3</sup>	<b>9</b>	<b>9%</b>

<sup>1</sup>Practices which are demonstrably useful and should be encouraged.

<sup>2</sup>Practices which are clearly harmful or ineffective and should be eliminated.

<sup>3</sup>Practices of insufficient evidence and should be used with caution.

On admission, health care provider washing hands with soap and water before vaginal examination was observed in only 10, whereas hand-washing with soap and water after vaginal examination was 93 (92%).

On assessing how many health workers performed vaginal examination on each woman before delivery, the minimum was one examination, and maximum was 3 examinations, with a mean of 1.75 examinations. By one person, 36 [n=101] women were examined, 54 [n=101] women were examined by two persons, and 11 [n=101] women were examined by three persons before delivery.

**7.7.3 TABLE 7: Second stage of labour: Deliveries by attendant:**

	Deliveries [n=101]	Episiotomies [n=29]	Scissors used [n=28]	Scalpel blade used [n=1]	Perineal tear [n=17]
Midwife	87	27	26	1	15
Auxillary nurse	12	1	1	0	1
Student	2	1	1	0	1

The use of scissors for performing an episiotomy is very common. Data indicated that out of the 29 episiotomies performed, only one woman was given an episiotomy by using a scalpel blade, and this was conducted by a midwife. Midwife-attended deliveries were indeed very high in this study, as indicated in **Table 7**. Medical doctors, who are expatriates, do not seem to conduct significant number of deliveries in this health facility, as it is shown in the data. Sterility of instruments used in the conduct of deliveries seems to be a compelling issue worth discussing, in spite of the presence of a functional autoclave. Instruments are packed in the autoclave, and it becomes difficult to know which of the instruments came first in the autoclave. In 99% of the deliveries observed, the instruments were regarded unsterile; since health care provider uses most of the time bare hands to pick them up from the autoclave. The use of bare hands to pick instruments may not be comprehensible as there is a 'cheatles' forceps for picking instruments in its container but without antiseptic lotion so that the forceps could be immersed in it and lotion be changed from time to time to enhance the cleanliness of

the forceps. Despite the availability of antiseptic lotion in the Pharmacy unit stock, unfortunately health care providers do not make requisitions for it. It has been also observed that where these delivery sets are placed (trolley or delivery bed) appears unclean. Only one of the deliveries observed can be regarded as clean, for much care have been used to pick up the instruments from the autoclave, with a sterile surgical gloved hand, and placed on a trolley which has been cleaned to satisfaction. Dusty trolley in the ward is common in this labour ward.

Furthermore, only two of the deliveries observed, has been found to have a complete delivery set [n=101]. Incomplete delivery set has been found common in this labour ward when health care providers conduct delivery. But assembly of delivery set before delivery starts has been found to be good [84%, n=101], but incomplete delivery set. Also, in 81 (80 %) of the deliveries observed, mother was informed of the stage of labour.

#### 7.7.4 TABLE 8: Practices observed during second stage of labour:

	[n=101]	Percentage (%)
Instructed to be in lithotomy <sup>1</sup> position	101	100%
Episiotomies performed <sup>2</sup>	29	28%
Application of fundal pressure <sup>3</sup>	9	9%

<sup>1</sup>Practices which are clearly harmful or ineffective and should be eliminated.

<sup>2</sup>Practices which are frequently used inappropriately.

<sup>3</sup>Practices of insufficient evidence and should be used with caution.

Of the episiotomies performed, almost all [n=28, out of 29] were primi-parous women, and one (1) single mother was a multipara (para 2).

Of the total women who had either episiotomy or tear, 44 (43.6%) had local anaesthesia given. Data also indicated that with the total episiotomies performed, another 17 women had tear and repaired.

Furthermore, the analysis indicated in this study is in the view that there seem to be an association between parity of women and health care provider's decision to perform episiotomy [2, n=101]=.000, p=<.001), although the sample may be small.

It may be of interest to state that a student midwife was allowed to deliver a woman in her first pregnancy. Such a woman sustained a severe tear, which had to be carefully sutured by the midwife on duty under local anaesthesia. This unfortunate situation may be associated with insufficient supervision of inexperienced health workers.

In this study, 80% of the women who delivered were informed on the sex of their babies immediately after birth.

### **7.7.5 Third Stage of Labour:**

The taking and recording of pulse and temperature seem not to be impressive immediately after delivery as shown in Table 2.

To rule out urine retention, bladder inspection was done for 76 (75%) of the women. Blood loss estimation was performed for 95 (94%) of the women. Examination of the placenta to confirm that there are no retained products of conception was noted in only 20 (19%) of the women. Post-delivery manual exploration of the uterus was performed in 81 (80%) of the women.

The prophylactic use of oxytocics (oxytocin) has been recorded as 62 (61%) of women in the study, and that for ergometrine was 29 (28%). The preferable route for both oxytocin and ergometrine was intramuscular, 59 (58%) for oxytocin, whereas for ergometrine, 27 (26%).

The number of women whose labours were augmented cannot therefore be included as for prophylactic use of oxytocics, and therefore their figures were not part of this explanation. But again some women are augmented in whom oxytocin were given intramuscularly after delivery. For oxytocin, only 3 women were given intravenously, whereas for ergometrine, 2 were given intravenously after delivery as a result of the augmentation.

### **7.7.6 Immediate Newborn Care:**

Apgar score at first minute after birth were assessed and recorded for 98 [n=101] babies. In 95 babies, the apgar score was between 8-10, and score between 5-7, in 6 babies. A total of 3 babies did not have their apgar scores checked at one minute. One baby's apgar score after one minute (after delivery) was taken, but found not to be recorded. The reason given for this



was that since the baby needed resuscitation, the midwife could not give recording of the apgar score a priority at that time.

Of the 4 babies who needed some form of resuscitation, 3 were actually resuscitated. Of the 3 babies resuscitated, one was conducted by a midwife, and the other two by a student midwife. Furthermore, of all the three babies resuscitated, the tube used for the nostrils in the supply of oxygen and suction of secretions, were unsterile.

Baby drying with warm towels or clothes before wrapping is common [97, 96%]. In addition, [99, 98%] of the babies had been wrapped in dry towels or clothes after being dried. Immediate bath of the baby has not been observed in this facility, which could be regarded as a positive step for the babies. But surprisingly, only 15 [15%] of the women had their babies placed on the abdomen of the mother immediately after birth.

Routine examination of the baby immediately after delivery was observed in only 4 of the babies.

The application of ophthalmic antibiotic such as tetracycline eye ointment into the baby's eyes was observed in only one of the babies.

### **7.7.7 Time spent in the labour ward after delivery:**

The minimum time spent in the labour room or facility was one hour, and the maximum time being eighteen hours, with a mean of 4.7, a standard deviation of 2.9. Analysis has shown that those who spent three hours in the facility for supposed observation was the highest number of women [32, n=101], and one spent eighteen hours for observation, and only one spent one hour in the facility before discharge. Early discharge may be seen as not a tradition in this facility, but there are some problems implicated. Since the presumed post-natal ward is small with only seven beds, for example if at night, the post-delivery mother has to be transferred to another ward where the lone midwife cannot really observe, hence the distance. Even at a time where the midwife works with a nurse auxiliary, the auxiliary nurse cannot be assigned to that other ward to watch on post-delivery mothers, when there are other jobs to be done in the delivery room. Again nurses responsible for that ward are stationed in a paediatric ward, and so come into that ward to give specific tasks to their adult patients such as giving treatment. The nurse(s) in the paediatric ward may be informed that some of post-delivery

women are in their other ward, but it do not become a responsibility on those health workers to seriously monitor the post-delivery mothers who may have been brought to their area. Therefore this transfer is just meant to decongest both the delivery room and the post-natal ward, but in practice no effective observation is given to those who are moved to another ward in the name of observation. In practice, those women are left in the mercy of their escorts, who may report to the midwife in the labour ward if problems have been suspected. Problems can happen to the woman without the knowledge of the staff of the labour ward, nor nurse(s) in the paediatric ward who are supposed to oversee that ward. Such complications could be detrimental to both woman and that of the baby.

#### **7.7.8 TABLE 9 Frequency of foetal heart monitoring:**

	<b>N =101</b>	<b>Percentages (%)</b>
On admission only	<b>74</b>	<b>73%</b>
Every 30 minutes	<b>1</b>	<b>1%</b>
Every 4 hours	<b>24</b>	<b>24%</b>
Not at all	<b>2</b>	<b>2%</b>

#### **7.7.9 TABLE 10 Frequency of performing vaginal examination by health worker:**

	<b>N =101</b>	<b>Percentages (%)</b>
On admission only	<b>40</b>	<b>40%</b>
Every 1 hour	<b>4</b>	<b>4%</b>
Every 4 hours	<b>57</b>	<b>56%</b>

#### **Reasons given for Intravenous Infusions:**

High blood pressure (to expedite labour) [n =1]; Excessive vomiting [n =3]; Slow progress of labour [n =10]; Foetal distress [n =1]; Suspected multiple pregnancy in labour [n =1]; Maternal exhaustion [n =1]; No reason given [n =3].

### **7.8 DISCUSSION:**

As the results indicate, substandard quality of intra-partum care practices was found in this major health centre. Present were harmful practices that did not match with current evidence. In addition to effective resource allocation, efforts to implement only those practices that are

effective, should be priority to improve the quality of maternity care services [46]. There were some deficiencies in intra-partum care, compounded by non-adherence to infection prevention and control practices. Some obstetric practices in the facility are not supported by World Health Organization's recommendations [6]. Practices which are harmful or ineffective such as delivering in strict lithotomy position, manual exploration of the uterus seem to be common. It has been asserted that care providers need to practice according to evidence-based standards to enhance quality and costs of care patients receive [50]. Therefore, evidence-based practices have been found to have the proven advantage to improve the quality of maternal care services. An earlier study in The Gambia on quality intra-partum in the country's main referral hospital identified that most practices were not in consistent with the best available evidence [8], denoting substandard care.

Practices which are demonstrably useful and should be encouraged such as allowing oral fluids to the laboring woman, partograph use throughout labour, use of sterile instrument to cut the umbilical cord, and placing the newborn on mother's abdomen immediately after delivery, and routine examination of the placenta and membranes were found to be infrequent. Although beneficial forms of care practices such as taking and recording of temperature and blood pressure was found to be high, taking and recording of pulse and application of aseptic measures and some important care practices of the newborn such as application of tetracycline eye ointment in the eyes and routine examination of the newborn immediately after delivery were found to be very low.

Intravenous infusion was given for three women, the reason for which was not indicated. Meaning that care provider decides to give without supposedly a genuine reason. There should be a genuine reason for giving intravenous infusion for a laboring woman, since setting up infusion is an invasive procedure.

For routine conduct of delivery preparedness, incomplete delivery set had been found to be common. This may be attributed to insufficient delivery instruments in this delivery ward or work-overload due to doing some other clinical functions in addition to labour care.

Medical doctors do not seem to conduct significant number of deliveries in this facility, as shown in the data. Doctors may probably be concerned with management of complicated cases when called upon.

## 7.9 LABOUR MANAGEMENT:

All women [101] were instructed to be in lithotomy position during delivery. Examination of the placenta was found to be low, 20 (19%), women allowed to take oral fluids was found in 50 (49%) of the women observed. Non-supine position during labour and delivery should be encouraged, as a practice which is demonstrably useful [6]. The parenteral prophylactic use of oxytocin was found to be 62 (61%), whereas that of ergometrine use was 29 (28%).

Manual exploration of the uterus was found to be common, observed in 81 (80%) of the 101 deliveries, this is not in line with evidence. Although assessment of vital observations for blood pressure and temperature taking and recording was found to be high, the use of the partograph throughout the labour process was found to be very low [13, n=101].

The partograph is a graphic tool used to monitor progress of labour, to help identify problems along the way for appropriate intervention. Progress of the first stage of labour is plotted on this sheet of graph once a woman in labour enters active phase of labour, and findings are therefore plotted on this graph. WHO recommends the use of the partograph on all women admitted in labour [6, 73]. This very high non-throughout use of the partograph may probably be skilled workers and other care providers' incompetent use of this essential monitoring tool, although it may also be due to negligence and non-concern for quality intra-partum care. Most women were monitored by using the partograph once in active labour, but the plotting of findings was not continued throughout labour. Lack of trained personnel and incompetence of the available staff may impair the quality of intra-partum care practices [5]. It is of importance to look into this issue. Skills can be improved through supportive supervision with hands-on training, as a strategy that may lead to competence [62]. Supportive supervision is crucial, as asserted by a Mozambican project that introducing the concept of supportive supervision can help promote on-going training, support to management and continuous quality improvement [66]. A study conducted in poor settings in India recommended for the training of obstetric staff in the proper use and interpretation of the partograph [75].

A study conducted in Cali, Colombia suggested that intra-partum care was not guided by the best available evidence [43]. In this study [43] five of the six selected beneficial obstetrical practices were not widely used (i.e. companionship during labour; allowing women's choice

of position during first stage of labour; active management of third stage; external cephalic version for breech presentation at term; use of absorbable synthetic suture material for episiotomy; and prophylactic antibiotics for caesarean section), whereas all four selected ineffective practices were often routinely performed. In a Lebanon study [40], a large proportion of hospitals in the study perform routine procedures and interventions which either have no demonstrable medical benefit, or may even be harmful to women and their infants.

Companionship during labour do not seem to be encouraged in this delivery ward, although sometimes it could be observed some care providers allowing relatives or escort to women in labour to be with relative some of the time, but not throughout. Women who have access to continuous one-on-one support during labour are less likely to have regional analgesia/anaesthesia, have an instrumental vaginal birth, have a caesarean birth, report dissatisfaction with or negative rating of the childbirth experience and they are more likely to have a spontaneous vaginal birth [76]. During companionship at birth, massage and encouraging touch have shown to reduce pain, stress and anxiety and helps the woman to cope with their pain and made them feel more comforted and reassured [76]. Supportive care may therefore be defined as a non-medical care that is intended to ease a woman's anxiety, discomfort, loneliness, or exhaustion, to help her draw on her own strengths, and to ensure that her needs and wishes are known and respected [77]. In addition to the probable clinging on old embedded practices, the availability for adequate privacy may be implicated, to allow companions to be present [44].

The application of fundal pressure on the 9 women observed in the study could be worrying. This procedure could cause serious consequences to both mother and the newborn. There was no clear indication why they were performed during the time of delivery. There is no published scientific evidence that states that fundal pressure is an appropriate or safe technique to shorten the second stage of labour, and therefore health care providers should be aware of this. Fundal pressure can contribute to foetal injuries such as brachial plexus stretching and neurological and orthopaedic injuries due to undue force on bony parts [76].

The possibility for performing fundal pressure for these women could be the lack of a vacuum extraction set in this delivery ward. For the whole study period, this essential instrument was not available. Absence of essential instruments like these is common in this delivery ward. For example, equipment like manual vacuum aspirator and manual suction machine are not in this delivery ward. This may have contributed to reasonable extent in the high referral rate of this major health centre to hospital in Banjul, Bansang or Farrafenni. In an assessment study conducted in Ghana, India and Kenya [75], equipment like vacuum extractors, manual vacuum aspirators, and long arm gloves for manual removal of placenta were missing in most of the health facilities assessed. But another issue one may have doubt is whether all the care providers can competently use these equipment when made available. It is of logic also to note that personnel who really care for women in labour may likely not to make pressure on the availability of such equipment when they know that they are not comfortable in their competent use. Regular monitoring and giving supportive supervision may likely be able to address issues like these if that is the case. It is suggested that weak supportive supervision have been observed in this facility.

Infection control practices through application of the universal precautions and health care provider giving of information on results of examination were found to be infrequent. Unfortunately in 99% [n = 101] of the deliveries observed, the instruments were regarded unsterile. The one health care provider who used correct aseptic measures could have just happened by chance, or the presence of the researcher may have influenced practice in this case. Principles of cleanliness at birth include clean delivery surface, clean hands of birth attendants and a clean instrument to cut the umbilical cord, leaving the cord stump without dressing or treatment [78]. The assessment of the delivery floor indicated that cleanliness was not satisfactory, and infection prevention and self-protection do not seem to be the culture within cleaners. During the study period, some personal protective equipment in the form of heavy duty gloves was supplied to all cleaners in the delivery ward by the facility management, but cleaners do not have the habit of using these gloves at all times when cleaning floors. To improve the control and prevention of infections in countries with limited resources, a multi-facet approach is needed that is based on improved health care structures, increased knowledge, effective guidelines, behavior changes, attitude adjustment, better and efficient use of existing resources, as well as international cooperation [79]. Universal precaution measures for infection control can protect the health worker, the laboring woman

and her unborn baby. A study that investigated the practices of rural birth attendants in Egypt [80] had implications for the design of training programmes for birth attendants that need to focus on such programmes that would encourage appropriate infection control practices, disinfection of delivery instruments, and aseptic care of the cord.

Whereas health care provider's hand-washing after vaginal examination on admission was very high (92%), hand-washing before vaginal examination surprisingly was very low, 10 (10%). Infection prevention practices should aim at preventing infection to both clients and health staff. Precautions such as hand-washing before procedures and disinfections will interrupt the cycle of transmission; hence transmission of diseases will greatly decrease [80]. It has been proven that infections transferred from patients to staff are through hands contaminated from patients' infected body fluids, excretions, secretions or from contaminated items that are brought into contact with skin lesion or mucous membranes of staff or vice-versa [80, 83]. Simple hand-washing have been found to be useful in the prevention of cross-transmission of disease-causing organisms. Having established this relationship between the hands of health care workers and the cross-transmission and spread of micro-organisms between patients, it would seem that a simple but effective measure of reducing the incidence of nosocomial infections would be hand-washing [81]. Although hand-washing has been found to be effective, the effectiveness of the hand-washing could be in doubt if the right materials for the hand-washing are not available [82]. Hand-washing may not have been forgotten totally in this facility, but the practice should be strengthened. Hand-washing may not be the problem of this rural health facility alone, it have been found to be a problem even more advanced settings such as that of the small study conducted in University Hospital of Wales [81].

Information on results of examination at time of admission was observed in only 3 [n =101] women. Among other advantages, informing the mother on the results of examination at time of admission can help reduce fear and stress. Several psychological benefits such as increased patient satisfaction and perception of experience, enhance emotional well-being and increased sense of patient empowerment and self-esteem have been associated with patient decision-making involvement and patient control [84]. It has been viewed that implications specifically related to patient involvement in childbirth decisions and patient control include lower levels of fear and less depressive and post-traumatic stress symptoms after birth [84]. Giving feed-

back to the laboring woman should not be restricted, this has the potential to enhance obstetric outcome. Health care providers need to be aware of this when giving care to laboring women, particularly for these rural women. An enhanced awareness of the rural pregnant women's psychological vulnerability and insecurity is necessary and better education and training of health workers in interpersonal skills and attitudes is required [85].

Baby placed on the abdomen of the mother immediately after delivery was found to be very low, 15 [n =101]. Placing the baby on mother's abdomen will promote skin-to-skin contact and initiate breastfeeding early. Skin-to-skin contact have been found to be the best way of keeping the baby warm, in the drive towards prevention of hypothermia [86]. Furthermore, a sustained skin-to-skin contact also initiates colonization of the newborn with maternal flora (as opposed to hospital flora) and facilitates olfactory learning, successful intake of colostrum and sustained breast feeding [87].

Application of ophthalmic antibiotic such as tetracycline eye ointment into the baby's eyes was observed in only one of the babies. This practice has been found to be an effective strategy in preventing eye infections due to infections such as sexually transmissible infections from the mother, in case she is infected. This is given as a prophylactic treatment for the newborn. World Health Organization recommends the application of antimicrobial drops (1% silver nitrate solution or 2.5% povidone-iodine solution) or ointment (1% tetracycline ointment) to the baby's eyes immediately after birth [73].

Bathing the baby has not been assessed since it was found to be not a tradition in this facility, probably that health care providers are aware of the fact that this practice should be delayed. Delay of bathing the baby is a recommended practice, since blood, meconium and some of the vernix caseosa will have been wiped off during drying at birth [86]. The baby should be bathed for at least not before the first 6 hours after birth, and preferably within the first 24 hours, second or third day after birth, and not until the baby's temperature is stable [86, 89]. Since bathing of babies have not been conducted in the facility for all deliveries observed, it may be genuine to state that health care providers should give relevant advice and information on the basic principles of bathing the baby at home.



The theatre of the facility is non-functional. To at least be able to conduct caesarean deliveries toward saving lives of women and their babies, this essential function is vital. In addition, having local caesarean section capability is associated with greater proportion of local deliveries and a low rate of preterm deliveries [88]. The other advantage is that women would be able to remain in their home communities when local operative delivery is available, thus reducing psycho-social and economic costs to them and their families.

Evidence-based intra-partum care has a positive multiplier effect, hence improvement of care practices will not only improve maternal outcomes, but likely to equally improve neonatal outcomes. Studies conducted in a rural hospital of South Africa [90] and The Gambia rural hospitals [91] implicates inadequate intra-partum care in addition to inadequate obstetric support for the unacceptable poor neonatal outcomes such as stillbirths and neonatal deaths.

This major health centre was selected as it is the only referral facility for other facilities in this Health region. It is also strategically located, with no project intervention on maternal health care, as is found in other major health centres in the country. In this Health region, this facility is expected to deliver standard of intra-partum care that is of quality.

The presence of a non-participant observer may also have potential to influence practices and care. On the other hand, some care providers may also feel some anxiousness or feel threatened aware that they were observed which may also negatively influence their practices and care. These could introduce some biases.

To reduce risk of these possible biases, researcher attempted as much as possible to sustain a positive working relationship with all health workers assigned to this delivery ward, in an attempt for them to feel relaxed about presence of researcher in their midst.

## **7.10 CONCLUSION:**

The quality of intra-partum care in this rural referral major health centre is below standard. The provision of the existent National Maternity Care Guidelines for health care providers who care for women in labour, with supportive supervision and monitoring has potential to

enhance quality of care in this rural major health centre. Evidence-based intra-partum care that is of quality does not only improve maternal outcomes, but equally neonatal outcomes, particularly for low-resourced settings like Soma Major Health Centre.

Therefore, it is concluded that most of the key practices are not guided by the best available evidence based according to WHO recommendations, and the care is substandard for laboring women and their babies.

## **8.0 CHAPTER 8: VIEWS AND PERCEPTIONS OF HEALTH CARE PROVIDERS AND WOMEN ON QUALITY OF INTRA-PARTUM CARE IN A GAMBIAN RURAL MAJOR HEALTH CENTRE:**

### **8.1 INTRODUCTION:**

Women may not go to a facility where their delivery or treatment will not be positive for their health and that of their babies. In addition, women will not like to go to a facility where care providers are not friendly, tend to harass them even though their technical competence is evidence-based. To reduce maternal deaths dramatically, all women need access to high quality delivery care with at least they key elements: skilled care at birth, emergency obstetric care in case of complications and a functioning referral system, which ensures access to emergency care, if needed [48]. This in other words means that women do not only need quality delivery care by skilled birth attendants, but also a mechanism in place to competently manage emergencies should a complication arise. World Health Organization defines skilled birth attendant as an accredited health professional such as a midwife, doctor or nurse, who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate post-natal period, and in the identification, management and referral of complications in women and newborns [92]. In The Gambia, nevertheless, some care providers who attend to women in labour and delivery are not skilled, and some are even not trained.

Quality of intra-partum care should also reflect the views and perceptions of both health care providers and women (consumers). It has been stated that issues of quality maternity and neonatal care now do not only focus on the technical aspects, but women's views and perceptions on care given to them [49]. Therefore, for a proper, safe normal care of labour that is evidence-based by health care providers, the required resources and supplies need to be factored in. Skilled workers cannot effectively bring about change, nor be held effectively accountable for lack of change if their working environments are not supported by health administrators and leaders that direct them [49]. Supplies, equipment and medicines are crucial for the provision of evidence-based intra-partum care, and therefore should be made available to health care providers. A more effective resource allocation, complemented by efforts to implement only those practices that are effective, should be a priority in order to improve the quality of maternity care [46]. The presence of a skilled attendant at birth have

been proven to be the answer to reduction of both maternal and neonatal mortalities and morbidities, however the availability of an enabling environment is critical for evidence-based intra-partum care practices.

For evidence-based practices to be operationalized there is convincing evidence that protocols and guidelines have to be provided to guide decisions and practice. Guidelines are systematically developed statements to assist practitioners and patient decisions about appropriate health care for specific interventions [67]. Protocols and guidelines can help enhance the availability of essential medicines, supplies and equipment; hence with the system in order, provision of required resources takes place.

The qualitative component seeks to address two research questions:

1. What are the perceptions of women who deliver in the facility on quality of delivery care?
2. What are the perceptions on quality of care of the health care providers who care for women in labour and delivery?

## **8.2 DATA COLLECTION TOOLS**

The qualitative component used an interview guide which aimed to explore women's views and perceptions on the care they received during labour, women's exit interviews and focus group discussion did not recruit women whose labours were observed in the non-participant observation. The health care providers who give care to laboring women were also interviewed on a one-on-one basis, to explore on their perceptions of care given in the facility, their opinion on recommendations to improve quality of care, and their challenges for conduct of evidence-based intra-partum care practices.

This study was exploratory in nature, in order to have a broader understanding of perceptions and opinions on intra-partum care. Qualitative methods were applied for this component.

Fifteen post-partum women and eleven health care providers were interviewed. In fact, all health care providers who work in the delivery ward were interviewed after consenting. An

additional 2 health care providers who once worked in the delivery ward, but now assigned to the reproductive and child health unit were also interviewed after consent. One midwife in the delivery ward could not be accessed for interview due to leave.

As mentioned earlier, walk-through-tool (WTT) was also used for the assessment of the various service areas of the facility that have a link with labour and delivery, with the maternity unit included in this assessment. The other service areas such as the pharmacy, laboratory, post-natal ward were included focusing on supplies, equipment, key medicines, completeness of records, and cleanliness. A tool for staffing audit was also used to compare available staff with recommended according to Ministry of Health and Social Welfare recommendations using the Human Resources for Health Plans [57], to identify gaps, if any.

### **8.3 DATA COLLECTION METHODS**

Data was collected by the Principal Investigator, with the support of the research assistants in the administering of the research instruments. Post-partum women for an exit interview were interviewed either when already discharged from facility and ready to go home, or at the Reproductive and Child Health Clinic of the facility. The interview of health care providers took place at the tail end of the study period. This component of the study was a prospective cross-sectional qualitative design.

When interviewing comprises of individuals, the minimum number should be higher-example 10 or more per study population, because the circumstances and behavior of individuals are more variable than is the case with group discussions [72].

For the focus group discussion, twenty post-partum women were invited to the session through the recruitment of one of the research assistants for women from the surrounding villages including Soma Town and some from the ongoing Reproductive and Child Health Clinic session. It centred around care women receive; perception on quality of care, the environment of the delivery ward; and on their experiences with health care providers; and to give their suggestive recommendations for better quality of care for women in labour.

The exit interview for post-partum women centred around the care they receive, perception on quality of care, on the environment of the delivery ward, and on the health care workers

(nurses, midwives, nurse auxiliaries and cleaners); and will be their suggestive recommendations for better quality of care for women who come for labour and delivery care.

Women selected for both the exit interview and focus group discussion were not part of the non-participant observation of labour and delivery.

The health care provider interview guide centred around the availability of a standard clinical guideline on labour and deliver care and its use; exploring their knowledge on some of the key recommended practices for women in childbirth; the challenges that they face during practice; their perception on availability or stock-out of some key essential supplies, equipment and medicines; and their suggestive recommendations for better care for women in childbirth. In probing, amongst others, workload, staffing, and space was also explored.

### **8.3.1 DATA PROCESSING AND ANALYSIS**

Like the quantitative component of the study, generated data was only accessible to the Principal Investigator for purpose of confidentiality. All these records were entirely under the custody of the Principal Investigator; they were kept under lock and key.

Individual in-depth interviews were scripted according to cadre of health care provider. The exit interviews were also scripted using age and parity as code.

The focus group discussion was both scripted and recorded on numbered tapes word-to-word.

Data was categorized into themes and sub-themes to ease analysis. Data was analyzed manually, using simple content analysis. This means the discussion content was categorized and classified so as to make meaningful inferences. The WTT and staffing audit was used as part of the triangulation approach, and also add to the value of assessing structure. The components of the WTT have been discussed earlier (**Chapter 4**), and are also included in the annex.

## **8.4 RESULTS AND DISCUSSION:**

### **8.4.1 HEALTH CARE WORKERS' IN-DEPTH INTERVIEWS:**

A total of eleven (11) health care providers were interviewed in this study. All health care providers working in the delivery ward were planned to be interviewed. However, one registered midwife (an expatriate) who was on leave was not accessible, and one nurse auxiliary was deliberately excluded simply because of her being a newly-employed staff member without any theoretical and practical experience in labour and delivery care.

### **8.4.2 CHARACTERISTICS OF HEALTH WORKERS:**

Amongst the midwives interviewed, two had once worked in the delivery ward, but currently assigned to the reproductive and child health unit of the facility. The interviews were scripted, but not tape-recorded. A total of 6 female health care providers and 5 male health care providers were interviewed. Amongst these, two were registered midwives, four community midwives; three were enrolled midwives, and two nurse auxiliaries. For the midwives, the minimum length of service as midwives was two years, whereas the maximum length was fifteen years.

### **PURPOSE OF IN-DEPTH INTERVIEW OF HEALTH CARE PROVIDERS:**

The main purpose of the in-depth interviews for health care providers was to know what were the challenges they face that may impede their application of evidence-based practices and quality of care they give, and also their suggestive recommendations for improvement.

A total of nine (9) main themes arose from the in-depth interviews with health care providers: guidelines not available; use of own guideline (not national document); guidelines' usefulness; practices to be encouraged for women in labour; challenges for maternity care; cleanliness; stock-out of essential supplies and medicines; staff attitude; recommendations for good maternity care; and sub-themes: training needs and staffing needs.

It is of importance to link the findings of the practices offered by health care providers to those who give such care through one-on-one in-depth interviews. Such an approach has potential to dig deeper on some of the issues and circumstances of their practices.

The health care provider interview guide centred around the availability of a standard clinical guideline on labour and deliver care and its use; exploring their knowledge on some of the key recommended practices for women in childbirth; the challenges that they face during practice; their perception on availability or stock-out of some key essential supplies, equipment and medicines; and their suggestive recommendations for better care for women in childbirth. In probing, amongst others, workload, staffing, and space was also explored.

#### **8.5.1 EXIT INTERVIEWS (WOMEN):**

A total of fifteen (15) women were interviewed in this study. These women were not part of the non-participant observation of laboring women. Some were interviewed on discharge, whereas others were interviewed at the facility's reproductive and child health clinic. Leaders in the Ministry of Health and local government who oversee maternal health services should consider women's own reports of their experiences in care and suggestions for improvement, as well as disparities that are found in experiences of care [93].

#### **8.5.2 CHARACTERISTICS OF THE WOMEN (EXIT INTERVIEWS):**

The minimum age of the women was 15 years, and the maximum age was 35 years. The parity of the women ranged from para 1 to para 6.

Of these women, eleven (11) of them had never attended formal education. One woman opted out of the exit interview because husband hired a vehicle for home, and so the situation made the woman to be in a hurry to go home, and so was excluded. The exit interviews were scripted, not tape recorded.

#### **PURPOSE OF EXIT INTERVIEWS OF POST-PARTUM WOMEN:**

The main purpose was to investigate from women about the care they receive, perception on quality of care, on the environment of the delivery ward, and on the health care workers.



This was conducted to gather feedback as much as possible on women's experiences of labour and delivery care given by health care providers, and possibly give suggestive recommendations as they see it, for improvement of care.

A total of 15 main themes arose from the exit interviews with post-partum women: good reception / bad reception; expectations were met / expectations not met; positive events of examination on admission and information sharing / negative events of examination on admission and information sharing; what was good in the facility / what was bad in the facility, poor concern for women / good concern for women; improvement on staffing; general cleanliness of the delivery room; availability of essential supplies, medicines and equipment; staff attitude; and need for operation theatre to be operational.

#### **8.6.1 FOCUS GROUP DISCUSSION:**

A total of twenty (20) women were invited to attend to the focus group discussion. These women were not part of the non-participant observation of laboring women. The discussion was conducted within the confines of the health facility-the reproductive and child health clinic, but on a non-clinic day to ensure privacy from those who has no direct association of the study project. It was conducted in a spacious room where those who work directly at the unit or health facility were not present. The room had sufficient privacy from any unexpected intruders. This was meant to allow women to express their feelings in a relaxed environment.

#### **8.6.2 CHARACTERISTICS OF THE WOMEN (FOCUS GROUP DISCUSSION):**

The ages of the women were not noted, but the parities of the women ranged from para 1 to para 9. Of the 20 participants, 4 of the women had a child for the first time, and they were young mothers. The women selected came from the different ethnic background (i.e Mandinka, Fulani, Wollof and Manjago).

## **PURPOSE OF THE FOCUS GROUP DISCUSSION:**

This was meant to know what are the views and perceptions of women on care received, have their divergent views on the care received, and possibly give suggestive recommendations as they see it, for improvement of care

The discussion was both scripted and tape recorded. The session lasted for almost three hours. Food and drinks was not provided, although water was made available for drinking purposes. A small token was given to each woman participant after the session, to show our appreciation for their attendance and contributions.

A total of 11 themes emerged from this discussion: expectations; attitude of health workers; poor communication and poor information sharing / good communication and good information sharing; lack of medicines; good care / bad care; client education sessions and teaching; bad practice; competence; and empathy and birth companion.

## **8.7 VIEWS AND PERCEPTIONS OF HEALTH CARE PROVIDERS AND WOMEN ON QUALITY OF INTRA-PARTUM CARE:**

### **8.7.1 LABOUR WARD ROUTINES:**

#### **RECEPTION:**

Good reception could make women feel comfortable in the laboring environment; it may help make women feel valued and dignified. It may also in turn contribute to satisfaction of women, hence the attention and care accorded them on arrival.

#### **Women's views:**

Almost all (14 out of 15 women) in the exit interviews opined that they had a good reception on admission. The reception may be good in the women's point of view, but researcher and assistants being also health workers may have influenced some of the responses. In addition, most of the interviews were conducted during the country's political campaign period. It is possible that some women may think negative responses may be incriminating to them, and that they may be recognized. However, women were informed for the reason of the

interviews to be having nothing to do with neither party politics nor government. Despite this, some of the women at the same time stated that the reception they had was bad, denoting some inconsistencies.

*“On arrival I found a small nurse who said examination has no use for now, until when I was in pain, then she rushed to call the doctor [woman, age: 17years, had a child for the first time].*

Another woman narrated her ordeal: *“It was not very welcoming for me, I think because I am single. Some words were offensive to me, especially the small nurse’s approach before the arrival of the senior nurse, I was not happy with how I was received [a young girl age: 16 years, who had a child for the first time].*

The practices of these health care providers mentioned could be attributed to poor attitude and lack of professionalism. It may also be that this “small nurse” could have been an untrained personnel with very little or no experience on how to examine a woman in labour. Women seek and choose services where they are likely to be respected and feel comfortable, in preference to other aspects of convenience or efficiency [94].

## **MOBILITY AND MATERNAL POSITION DURING LABOUR AND DELIVERY:**

WHO recommends freedom in position and movement throughout labour, and should be encouraged-category A) [6]. In addition, routine use of lithotomy position and supine position during labour has been found to be clearly harmful or ineffective and should be eliminated according to the WHO (category B) [6].

### **Providers’ views:**

Health care providers were asked on some of the important practices to be encouraged in labour and delivery. The interviews gave some interesting results. Encouragement to walk up and about; ask woman to pass urine on her own; was highly mentioned on the one-on-one interviews. However, only two mentioned that the woman in labour should be encouraged to take a position she is comfortable with when giving birth. World Health Organization recommends intra-partum care practices that have been proven by best available evidence [6].

Whereas the encouragement of woman in active labour to lie on her side was highly mentioned, a nurse auxiliary mentioned that the woman in active labour part from asking her to be mobile can also be encouraged to lie on her side so as to reduce labour pains.

### **ORAL FLUIDS AND FOOD:**

Offering oral fluids and food during labour and delivery has been found to be demonstrably useful and should be encouraged according to WHO classification of practices in normal birth -category A [6].

#### **Providers' views:**

Do not deny food or fluid intake during labour was highly mentioned by health care providers on the one-on-one interviews.

### **EMPTYING OF BOWELS:**

The passing of urine will depend on the woman's urge or the care provider observes a full bladder, but not on timing. Routine emptying of bowels thorough enema should be eliminated according to the WHO -category B [6], and bladder catheterization is amongst the practices which are frequently used inappropriately in the view of WHO -category D [6]. Routine bladder catheterization by the care provider when the woman can pass urine on her own may not be the best, and may not be encouraged too.

#### **Providers' views:**

Ask woman to pass urine on her own; empty bowels when she feels like doing so was highly mentioned by health care providers on the one-on-one interviews.

An enrolled midwife recommend for woman to pass urine every two hours on her own. This may indicate inconsistencies on some of the best practices.

## **PRACTICES:**

To gain an optimal outcome for the woman in labour and her unborn baby, only those practices that are in accordance with the best available evidence should be encouraged and applied by care providers [6].

## **Providers' views:**

The two nurse auxiliaries interviewed stated that a woman in labour should be encouraged to push with contractions if in the second stage of labour. A woman may be fully dilated, but descent of the presenting part (its level) is very crucial to such supportive advice. On the other hand, one may understand this from this cadre, due to level of knowledge, as they have not been professionally trained.

It did not come out explicitly clear in the discussions as to why health care providers do not give care that is evidence-based when most of them are aware of these practices. Most of the recommended evidence-based practices can be practiced without any material cost such as routine hand-washing [soap was always available during the time of study] and infection control practices; interpersonal communication, allowing freedom in position and movement, encouraging non-supine position during labour, allowing oral fluids and food and application of antibiotic ointment or drops into the eyes of the newborn [medicine for eyes were available in the pharmacy and the ophthalmic unit during time of study].

## **COMMUNICATION:**

Good communication brings about mutual understanding between women and health care providers, and health care providers must take a centre-stage to facilitate this. Positive interpersonal communication gives women the opportunity to be able to express their needs, feelings and opinion on their health status and care. It also brings about a more trusting relationship between health care providers and women. Giving women as much information and explanation as they desire has been found to be demonstrably useful and should be encouraged according to WHO classification of practices in normal birth -category A [6].

**Providers' views:**

The offering of reassurance, information sharing, communication which includes explanations on procedures before performing them, and giving of results to the laboring did not flow out well from any health care providers interviewed, except one midwife (an expatriate) who mentioned it. Attention to the women's needs and individualized care requires good communication skills that give the woman time and a real opportunity to have a say [95].

**Women's views:**

Some women seem to be satisfied with events of examination and information sharing. There are variations in opinion as regard to events of examination on admission and information sharing. Some of the women are not satisfied in this: some are of the opinion that information was not given on the examination to be performed, although they agreed that after examination, the results were explained to them. Implications specifically related to patient involvement in childbirth decisions and patient control includes lower levels of fear and less depressive and post-traumatic stress symptoms after birth [84].

*"I was not informed on the examination to be done. Although after the examination, the results of the examination were explained to me. My blood pressure and temperature was checked, examined my abdomen, and the baby was listened to" [a woman age: 22 years, had a child for the first time].*

A woman in the exit interview voiced out that when she was examined on admission, the nurse did not inform her on anything or procedure she wanted to do on her. Information sharing is crucial to women's satisfaction of care given. Communication through information sharing could help allay fears and concerns.

But a woman in the focus group discussion, in express of her past experience with health care providers in this facility pointed out that she would recommend timely examination and quick feedback by nurses, midwives and doctors. Good attention, timely assessment and giving information to women before and after assessment seem to be uniform. Women want to be talked to, attended to in a timely fashion, and relevant information to be given them. Such an approach among other advantages enhances woman to make informed choices for decision-making pertaining to their health status.

A handful of women were of the opinion that information sharing between women and health care providers need to improve. Women are concerned with attitudes of some of the health workers. Women are of the opinion that some of the health care providers do not communicate with them well. This inadequate communication has also been mentioned by women in the exit interviews. A woman in the discussion narrates: *“I was given intravenous infusion, because I believe I was draining. But when the midwife mounted the infusion, nothing was communicated to me why and the need for the infusion. My state of labour had not been communicated to me”*. But one woman said in her case, on examination, every step of the examination has been explained to her, what they about to do, and they do seek her consent. This denotes that some of the health care providers do try to communicate to an acceptable level. Giving information to and good communication skills with women contributes to women’s satisfaction as explained in [95, 80, 94, and 96], this helps to maintain women’s dignity. Kongnyuy and colleagues opined that quality of care should be improved from both the providers’ perspective and women’s view point (participant satisfaction) [97]. This has also been cited in [84, 98 and 85], asserting that it tends to increase emotional well-being and also increase sense of patient empowerment and self-esteem have been associated with patient decision-making involvement and patient control. Therefore, women should take centre stage in the decision-making process by giving them relevant information and communicating with them in a clear language they understand.

Client education sessions and teaching provoked a lot of narrations and comments. In the overall, women concluded that health education sessions are weak and ineffective. Some women were even with the opinion that health education sessions do not exist, both in the delivery ward and post-natal ward. They stated that health care providers only ask questions. Some of these post-natal women opined that even at the reproductive and child health unit, health education sessions are only conducted at the child welfare clinic, not the antenatal clinic. Poor communication and poor information sharing have also been mentioned in the exit interviews. A woman puts it this way: *“Usually when midwives give us this small operation (i.e. episiotomy), they do not inform us before performance of the operation. They do not also tell you enough on how to care for the operation site at home”*. Interpersonal skills and effective communication seems to be an issue in this study, and one may suggest some form of training on interpersonal skills and attitudes is required as mentioned by a Malawian study [85].

## **CLEANLINESS:**

Infection prevention practices should aim at preventing infection to both clients and health staff in an attempt to interrupt the cycle of transmission [80], proper cleaning and scrubbing of the delivery ward is one of those essential practices. Areas such as the personal hygiene of both labouring women and care providers as well as the cleanliness of the environment and materials used during labour and delivery should be given good attention. To prevent possible infection to the woman and the care giver should include avoidance of direct contact with blood and other body fluids by the use of gloves during vaginal examination, delivery of the baby and in the handling of the placenta [6].

### **Providers' views:**

Cleanliness of the delivery ward and its environments has also been clearly pointed out by the health care providers. Health care providers viewed that this has to be improved. Nurse auxiliaries had this sentiment to as voiced by one of them: *“improve cleanliness of the delivery ward, and institute strict disciplinary measures against non-committed orderlies (cleaners)”*.

As a non-participant observer, researcher observed, unfortunately sometimes a shift, particularly afternoon shift, may not be covered by an orderly (cleaner) due to absence. Sometimes the cleaner on afternoon shift may leave the ward for home before the official closing time, thus leaving the delivery room and environment uncared for. More so if a delivery occurred after her or his leaving, then it becomes an issue on how to clean a mess of blood for example. Such a situation may compel health care provider to ask relative who has no experience on how to take care of medical waste, to clean up the mess, usually with bare hands, for example. The absence of cleaners from work it has been observed tend to be common with female cleaners. This may be attributed to the rainy season also, as some of these female cleaners, would still want to work in their rice fields, at the same time on active shift duty, it has been observed.

Except for the laboratory unit, cleanliness status for the delivery and post-natal wards, general out-patient unit and pharmacy unit was suggested to be unsatisfactory in the WTT assessment.



### **Women's views:**

General cleanliness of the delivery ward and its environment came out well in the exit interviews. Women opined that although there were some improvements compared to before this time, cleanliness of the delivery ward and toilets need to be improved. A 22-year old lady state: *“the cleanliness of the delivery room toilets should be improved. The toilets appear dirty, and the health facility premises appear dirty too, and have to be improved”*.

In addition a woman lamented that stray animals such as hens and chickens need to be prevented from entering the wards, so as to avoid them from soiling the wards [a 33-year old woman]. To improve the control and prevention of infections in countries with limited resources, a multi-facet approach is needed that is based on improved health care structures, increased knowledge, effective guidelines, behavior changes, attitude adjustment, better and efficient use of existing resources, as well as international cooperation [79].

### **PRIVACY IN THE DELIVERY WARD:**

Respecting women's right to privacy in the birthing place has been found to be demonstrably useful and should be encouraged according to WHO classification of practices in normal birth -category A [6].

### **Providers' views:**

Extension of the delivery ward has been recommended by midwives. Space in their view is an issue and so need to be addressed. Midwives are of the impression that they are ready to encourage birth companion, but on the condition that space is improved to enhance privacy. World Health Organization recommend birth companion at birth. *“There is need to encourage birth companion at birth based on the condition that space is improved to enhance privacy” [a midwife states]*. Simbar and colleagues [99] suggested that providing one-bed delivery rooms should be considered as the future structural modifications to make the presence of an accompanying person possible. In this context, the redesign of the labour ward by adjusting in a way that ensures privacy and confidentiality for laboring women may be considered.

**Women's views:**

A 26-year old woman commented on the need for an extension of the delivery ward, to enhance privacy and confidentiality.

**SOCIAL SUPPORT AND BIRTH COMPANIONSHIP:**

Social support and birth companionship is a recommended practice. To give empathetic support by care providers and respecting women's choice of companions during labour and delivery has been found to be demonstrably useful and should be encouraged according to WHO -category A [6]. Empathetic support from both care providers and birth companions may reduce the need for pharmacological pain relief and as a result improve the child birth experience in women. The health care provider should therefore have the patience and empathetic attitude needed to support the woman during labour and delivery.

**Providers' views:**

However, because of the design of the ward, health care providers in their view have some reservations to the total implementation of birth companion at birth in this facility. Privacy in this ward is also a concern for the health care providers. Health care providers would have preferred an extension of the delivery ward that will enhance privacy for birth companion at birth, as mentioned by health care providers in the in-depth interviews.

**Women's views:**

Showing empathy and birth companionship, a woman raised a point that the home midwives (i.e. traditional birth attendants) are very helpful as they can be with you till you deliver, and so they (traditional birth attendants) should be allowed to be with their escorted women in labour. Birth companion at birth is encouraged in this facility; women are of the view that health care providers in the delivery ward are not all the time at the bedside of laboring women. Therefore, a relative or traditional birth attendant with the professional guidance of the health care provider may be allowed to be with laboring women in the delivery ward.

Some of the women in fact opined that male nurses and midwives are more understanding and empathetic to laboring women than female nurses or midwives. Some women seem not to have a problem with which cares for them, be it male or female.

### **ASEPTIC TECHNIQUE AND STERILITY OF INSTRUMENTS:**

Application of aseptic techniques in conduct of procedures in labour and delivery care is vital for prevention of infection to both women and their unborn babies. For example, sterility in the cutting of the umbilical cord is a recommended practice and should be encouraged according to the WHO -category A [6].

#### **Researcher's view:**

There are instruments in the autoclave assumed to be sterile, but not packed in sets. Sterility of instruments may be compromised hence health care providers most of the time uses bare hands to pick instruments, and place them in sometimes unsterile kidney dishes or trays. Instruments are heaped in the autoclave for sterilization, meeting other instruments in the autoclave, therefore when picking them again it becomes difficult which of the instruments were first placed in the autoclave ready for use. No complete sets could be seen packed in a delivery tray for proper sterilization. Poor aseptic measures have been identified in the non-participant observation of women in labour, and instruments used were regarded unsterile in 99% (Quantitative data analysis) of the deliveries observed. Unfortunately whether health care providers have now forgotten about infection prevention and control measures or not has not been made clear to the researcher, but inadequate facilitative monitoring and supervision may be implicated.

### **8.7.2 CHALLENGES FOR QUALITY INTRA-PARTUM CARE: MATERNITY CARE PROTOCOLS AND GUIDELINES:**

Protocols and guidelines can enhance the availability of essential medicines, supplies and equipment, in addition to facilitate adherence to evidence-based practices.

#### **Providers' views:**

All health care providers interviewed acknowledged the unavailability of maternity care guidelines. This has been well articulated by even the nurse auxiliaries, recognizing the fact that its availability, since they did not have any formal training, will help them a lot, with the in-service (hands-on training) from their midwives. It has therefore been mentioned by the midwives that they do not have a national document with them on the management and care of women in labour. At this point it is pertinent to state that the Ministry of Health and Social Welfare under the auspices of the Reproductive and Child Health Programme Unit produced a Maternity Care Guidelines since the year 2010 [109]. The researcher verified the unavailability of this essential guide with the management of the facility, but the document could not be found anywhere in the delivery ward, nor any part of the health facility service areas. None seem to be aware of the availability of these guidelines, which has antenatal, intra-partum and post-natal care components. This national document is in line with World Health Organization recommended practices of labour and delivery care. Protocols and guidelines are essential to guide decisions and practice [67].

The health care providers therefore affirmed that they use their own experience, knowledge from the midwifery training, and resources given to them in maternity care training workshops. As commented by one of the midwives: *“we use our own knowledge and skills, for there are no guidelines available [an enrolled midwife states].*

*“I use my own copy of emergency obstetric care guide, not a national one [an enrolled community midwife, but now works at the reproductive and child health unit of the facility, states].*

Health care providers seem to be aware of the importance of a practice guideline, particularly the midwives. However, it may be relevant to note that midwives highly associated the use of the guidelines for the management of emergency obstetric cases. Some of the cases they viewed the use of guidelines was in the management of cases such as pre-eclampsia, eclampsia, post-partum haemorrhage, management of birth asphyxia, and the management of HIV-positive women in labour. In this in-depth interview, nurse auxiliaries by virtue of practical experience gave constructive views too. A senior nurse auxiliary comment: “a practice guideline helps guide your practice”.

The availability of maternity care guidelines for the labour ward staff has been recommended by all the midwives interviewed.

## **STAFFING SITUATION:**

The geographic distribution of nurses and midwives had been found to be uneven in The Gambia, with distribution favouring urban over rural. This will affect the quality of health care delivery, particularly the rural health facilities. Midwives are crucial for the reduction of both maternal and neonatal morbidity and mortality, particularly in Gambian setting.

### **Providers' views:**

Shortage of trained staff was what first emerged in discussions with health care providers. Some gave the rationale that additional staffing is needed to match against the high workload [in their own view]. Midwives are fundamental components in the system of intra-partum care, and the system cannot operate safely and effectively when the number of midwives is inadequate, midwives are poorly deployed, and they are unable to engage in opportunities for training and updating [100].

The recommendation for two midwives in each shift emerged high. For example, an observation of staffing for each shift (i.e. morning, afternoon and night) shows more than two midwives in the morning shift, whereas for afternoon and night shifts, one midwife each was recommended. It is also not uncommon to see a nurse auxiliary handle an afternoon shift alone, but with support from a resident midwife who may be called upon if around, should a problem arise. In such circumstances, the nurse auxiliary may also be obliged to call the attention of an expatriate medical doctor for opinion. The availability of a midwife to attend to or supervise each laboring woman is essential.

This health facility has four (4) expatriate medical doctors. The recommended being three (3) means there are no gaps according to Human Resources for Health Plans of The Gambia [57].

For certified midwives, the recommended being four (4), whereas the actual was three (3). This indicates a gap of one. Yet still, two of these midwives are expatriates. When these expatriates leave on completion of contract, there is likelihood for a more acute gap before a replacement is found. The one midwife who is a non-expatriate, does not work in the delivery

ward full time, simply because the midwife takes on other overall facility management functions.

For enrolled midwives, three (3) works in the facility, and all three directly work in the delivery ward.

There are four (4) community midwives assigned to this facility, two of whom work in the delivery ward. However, the enrolled midwives and community midwives do not feature well in the national document [57] to what is the recommended for these cadres. The document [57] mentioned registered nurse midwives (certified midwives. It therefore became not easy to comment if there were gaps or not. The training for certified midwives is assumed to be better than for both enrolled and community midwives. The midwife is in the centre-stage of achieving both the 4<sup>th</sup> and 5<sup>th</sup> millennium development goals, as she or he is the prototype of skilled attendant in The Gambia, like many other poor-resourced countries.

The audit on midwives shows that there are seven midwives who work in the delivery ward full-time serving a total estimated population of 80 000, two of whom are expatriates and when contract completes, their replacement tend to take some time for another batch of expatriates; thus compounding the acute staff shortage on midwives.

The facility has eight (8) enrolled nurses, whereas the recommended being five (5), meaning no gap. None of these eight enrolled nurses work in the delivery ward.

There are three (3) community health nurses, whereas the recommended being five (5), with a gap of two. None of these community health nurses work in the delivery ward.

There are four (4) registered nurses in this facility, whereas the recommended is seven (7). This shows a gap of three. None of these registered nurses work in the delivery ward.

For cleaners (orderlies), there were eleven (11) cleaners, whereas the recommended being nine (9), meaning no gaps. However, the problem here may be how these cleaners are allocated to the different service areas, how they are supervised, amongst other issues.

Two (2) ambulance drivers are the recommended, but one was the actual for both maternity and non-maternity referrals. This means there is a gap of one driver to help the problem of a

single driver of being over-worked. It has been observed that this single driver is on 24-hour coverage of the facility at the time of the study.

### **Women's views:**

Women have expressed the need for improvement of staffing, particularly for midwives. Some women expressed that midwives need to be increased in the delivery ward, hence if several women come to deliver at the same time particularly at night, some women have to wait for the lone midwife on duty. This opinion seems to denote that usually, only one midwife is on duty during night shifts. In addition to staff shortage, some women have cited the need for improvement of resources and supplies: *“There should be an increment of midwives, and also improve resources and supplies. I sustained tears and was sutured” [a woman, had a child for the third time]*. The provision of skilled attendance at birth has to be linked with the availability of the enabling environment of equipment, supplies, medicines and transport for referral of emergency obstetric cases as cited by MacDonagh [101].

### **EQUIPMENT SITUATION:**

Adequate equipment, medicines and supplies are absolutely necessary in the delivery ward to enable health care providers to enhance skilled attendance during labour and delivery. Equipment is therefore essential for the provision of quality intra-partum care.

### **Providers' views:**

Observation and narrations from health care providers indicate that vacuum extraction set was not available. This instrument is essential to assist women fully dilated but delivery of baby is delayed. The use of this instrument by a skilled health care provider can improve both maternal and foetal outcome, and also reduce rate of referral to hospital. However, this instrument was made available just at the tail end of the study. Probably this was due to the researchers' concern raised and it may have reached the concerned authorities for this. Researcher helped to fit the instrument ready for use. Midwives the researcher talked with for

its use declared that they do not have the skill and experience in its use. This need to be addressed probably through simulation training on the use of the vacuum extraction set.

Midwives declared the need for a suction machine and a regular oxygen supply in the delivery ward. The delivery ward has a suction apparatus which is non-functional. The device used in the delivery ward for resuscitation of neonates and women who may need oxygen is an oxygen concentrator. This oxygen machine manufactures its own oxygen through the supply of electricity. Therefore, whenever electricity is not in supply and the machine needed, it becomes impossible to use this vital machine for the vital life-saving activity. Therefore, the unreliable electricity supply may render this machine some of the time useless. Probably a reliable, uninterrupted supply of oxygen cylinders for the delivery ward is highly paramount to address this pressing need, although an alternative would be a bag mask ventilator for the newborn, which is available in the delivery ward.

In the health care providers' views, a functional incubator for neonates is needed for the care of low-birth weight babies who may need such care. Yet still the unreliable electricity supply is a hindrance for use of such device, if provided. Some health care providers stated that standard delivery beds and more lithotomy beds will be of benefit to this delivery ward. What is meant by "standard delivery beds" was not clear to the researcher; hence apart from the two lithotomy beds in the ward, the other delivery beds are standard in the eyes of the researcher. What has been observed in this delivery ward during the period of the study was that beds in the delivery ward where women are admitted do not have bed sheets, and so women use own sheet from home or lie on the plain polythene/McIntosh sheeting of the mattress. A study conducted in Ghana, India and Kenya clearly mentioned the importance of equipment and supplies to address obstetric emergencies [75], and also mentioned by MacDonagh [101].

WTT facility assessment in addition shows that there is no manual aspiration set for safe abortion care. Laceration repair packs are not available, which means suturing is done by improvising on the available instruments for suturing.

### **Women's views:**

Women feel they need scanning machine, a functional operation theatre, better beds [a 26-year old woman stated].



## **SUPPLIES AND MEDICINES:**

Supplies and medicines are essential for the provision of quality intra-partum care.

### **Providers' views:**

Stock of supplies and medicines seem insufficient according to the views of some of the health care providers, but in the overall there is the notion that supply of key essential supplies and medicines seem to be fairly good. As commented by some of the health care providers and by researcher's observation, availability of both examination and surgical gloves seem to be unreliable. Sometimes the delivery ward is supplied with examination gloves only, and sometimes surgical gloves only. But sometimes both types of gloves are supplied in small quantities. *"Sometimes there are stock-out of oxytocin, gloves and gauze" [a midwife narrates].*

Magnesium sulfate has been scientifically proven to be effective in the management of severe pre-eclampsia and eclampsia and therefore the World Health Organization recommends its use in delivery wards where facilities for its use are available. Magnesium sulfate had been out of stock in this facility for more than three months; in essence, for almost five months up to the end of the research period, this essential life-saver was not available even at both Regional Medical Stores and National Pharmaceutical Services level according to reliable reports. A salient point was stated by a health care provider on the irrational use of supplies and medicines which need to be put into account [*"there is poor management of medicines and supplies" a midwife declares*]. In resource-constrained settings such as in rural settings, one will not expect enough of everything, but the wise use of supplies and medicines may be a good operational principle for maximal use of the limited resources. Childbirth should take place in a setting with the necessary equipment, supplies, drugs and support.....[95]. An Afghanistan study [102] also asserted that insufficient number of midwives, stock-out of essential drugs, supplies, lack of transportation in the health centre, and lack of 24-hours emergency services in the facility limits the effectiveness of intra-partum care.

The WTT assessment indicates that there is no cylinder with oxygen. The ward uses oxygen machine that manufactures its own oxygen, powered by electricity. This means when electricity is not available, then women and neonates who need it could not have it in this facility. Although there is a power generator back-up when electricity from the mains goes

off, the supply of fuel for this generator is erratic. In addition, if electricity from the mains goes off even at night, if fuel is available for the power generator, this machine will only be put on if there is an emergency, but not to continue to give normal lighting for the rest of the night or for normal labours.

There are no clean linen sheets for women. Women in labour are seen lying on plain mattress without bed sheet spread on them.

At the time of inspection, antiseptic lotions are not available in the delivery ward, although stock is available in the pharmacy, meaning health care providers are not asking for it. An antiseptic lotion is not equipment but equally important as equipment, this seems to appeal to Adeyi and colleague's statement [37] that "the availability of equipment is necessary but not sufficient to guarantee performance of related tasks". Antiseptic lotions are essential for infection prevention and control. For cleaning of floors, cleaners use soap powder for this purpose. There were no detergents for proper cleaning of instruments before sterilization. The delivery ward did not have a bucket for de-contamination of instruments. Health workers improvise with an inappropriate bucket for this purpose. However, sharps disposable containers are in very good supply.

### **Women's views:**

Availability of essential supplies and equipment had been articulated. Women opined that more supplies, materials and medicines are needed. Uninterrupted supply of electricity has also been pointed out as a need for quality of care.

On availability of medicines, some women opined that medicines, supplies and equipment were an issue. One woman stated: *"Sometimes when you have been seen already, they will ask you to buy certain medicines. This is really a long time problem in this facility"*.

### **AVAILABILITY OF COMPREHENSIVE EMERGENCY OBSTETRIC CARE SERVICES:**

A functioning referral facility should be one which is able to manage emergency obstetric conditions which include performance of caesarean sections, should the need arise. This

study facility is meant to be so, but unfortunately it is still yet to function as such despite the fact that the physical structure is in place.

**Providers' views:**

Soma Major Health Centre has an operation theatre, but since the opening of this facility, the theatre to the best of our knowledge had never been operational. All the health care providers interviewed lamented on the need for this theatre to be operational, staffed with a medical doctor with surgery skills.

**Women's views:**

It is not a surprise that some women in the exit interview mentioned their wish for the functionality of the operation theatre. But even in the focus group discussion wish for the upgrading of this facility has been mentioned by women, i.e. the wish for other services to be able to be performed in this facility (variety of services).

A woman stated: *"The theatre should be made operational, in addition to better beds, and also extension of the delivery room (para 3, age: 26 years)"*.

**STAFF ATTITUDE:**

Providers' caring behavior towards women in labour is the simple action that maternity health care providers can express their kindness to these women [80]. It does not cost anything to be kind and use kind words when communicating with pregnant and laboring women. Health care workers in general should have the ability to work towards win-win outcomes, which may most likely make women feel more appreciated, cared for, and comfortable.

**Providers' views:**

Staff attitude stood out from these in-depth interviews. The comment made by a nurse auxiliary earlier that strict disciplinary measures need to be instituted on non-committed

cleaners may also be an issue of attitude. This may not only be the problem of cleaners, but some of the care providers too. Such a stance had also been cited by a midwife: *“strict disciplinary measures should be taken against less committed cleaners, so as to improve labour and cleanliness”*. The irrational use of supplies and medicines mentioned earlier may also be attributed to attitude. Furthermore, a midwife lamented that rectifications from seniors are not taken seriously by junior staff. When asked to explain further, researcher realized that midwife is of the opinion that some of the nurse auxiliaries do not seem to take orders from midwives. These are also attitudinal issues, and the lack of formal training may also be implicated. A cleaner leaving duty station for home before official closing time, or leaving some mess unattended for wanting to go home could also be linked to poor attitude and the lack of professional commitment.

### **Women’s views:**

One crucial issue came out from an 18 year old girl who lamented that on examination she was told that she is in labour but the time of delivery is too far away, and so if she live near, she can go home and come the next day. This could not be a practice of the facility, hence if a woman is in labour, whether early labour or nor, it could be unsafe to ask such a woman to return home and come back again. Complications in labour may arise at any period of her labour process, and so to be in a health facility is the safest. This could be detrimental to women and their unborn babies, given the problems with transport and the risk that could emerge. This could be regarded as bad practice.

Issues of bad practice emerged in the focus group discussion from some of the younger mothers. Asking woman to go home and to return back, due to the reason that woman was not initially in active labour emerged in this discussion, as was cited in the exit interview. An unhappy mother narrates: *“I came to the labour ward with pain; the nurse examined me and told me that my time of delivery is very far, and I was asked to go home, and to come again later, since I live within Soma environment. I came later when the pain increased, and the nurse after examining me, she told me that I am now in true labour. She then admitted me”*.

Sending laboring women home seem to be a common practice with some of the health care providers. Another young woman narrates: *“Some nurses do examine you, after which they go and start conversation with other health workers, forgetting that you are in pain. Some of*

*the nurses do not have friendly conversations with you so as to allay your fears*". Issues of poor attitude have been noticed with some of the health care providers. A woman in her candid opinion stated that if your first delivery was in the hands of a bad nurse (or midwife), you regret coming to the health centre again for labour and delivery care.

Women opined that more committed staff members are needed to enhance better attention towards women in labour. Some also echoed that some of the orderlies (cleaners) are not friendly to women in labour and their escorts.

"Orderlies (cleaners) are not friendly to women in labour and escorts to women. Their cleaning is not good and this need to improve" [a 33-year old woman mentioned]. Having a caring behavior towards women in labour is a simple action that one can express kindness towards women. To be kind does not cost a health worker anything, even with nice words and smiles will be appreciated. Unfriendliness may not be observed in some of the cleaners alone, some health care providers could be unfriendly too.

Some of the women in the focus group discussion mentioned that health care workers should treat all women equal. Such women opined that if you meet with a health care provider who does not know you, not much attention is given to you. Clients or patients on professional and humanity terms should be treated equally, but not based on friendship, acquaintance or family relations, since they are all entitled to respect and dignity.

Some of the women opined that some women are more valued than others at the antenatal clinic. Those women believe that the rule of first come, first served is not observed in the antenatal clinic. These women mentioned the antenatal clinic, not the delivery ward, but it is relevant to the overall service delivery. If confidence is broken at antenatal clinic, those women may also think that those in the delivery ward are not to be trusted, that they may be the same in attitude. A woman was blunt to state that because of the non-adherence of first come, first served rule at the antenatal clinic, she does not feel comfortable to be regular at the reproductive and child health clinic.

*"Nurses and midwives normally stay away and are checking with others. They will not know the condition of their patients, and blame patients for not calling for help" [a woman states].* Such a practice may be attributed to the acute staff shortage, particularly in the afternoon and night shifts. It could also be due to poor attitude of some of the health workers.

*“I came around 7 o’clock in the evening and I was told that my labour will be active at around 11 o’clock to 12 mid-night. So I decided to go home and come around 10 o’clock in the evening with my relatives” [a woman narrates].* Whereas this woman did not say that she was asked to go home and come later, it could have been ideal for the health care provider not to allow her to return home.

Issue of punctuality was raised. A woman commenting on attitude of health workers stated: *“Sometimes when you go to the antenatal clinic very early in the morning, you will be waiting until afternoon. The attitude of the nurses and midwives is not pleasant. What we really want is that nurses and midwives should treat all women and clients equal. If there is a woman whose condition needs urgent action and women are in a queue, other women need to be informed. But helping women because the nurse or midwife knows them is not fair”.*

Punctuality and respect for all women at all times is crucial both for the credibility of the Health agency and the trust and confidence community members are supposed to have on health workers.

Technology sometimes becomes a burden on some health care workers: use of the mobile phone when a client is face-to-face with you. A 33-year old woman narrates: *“the care given to me was good, although the midwife was initially concentrating much on her cell phone. Initially I was discharged home with the pretext that I was not in real labour. That decision I feel was not the best option. In fact that same day of my discharge I was rushed again to the facility. I had to hire a taxi in the evening to bring me back to the facility. This is expensive and risky”.* [33-year old woman, had a child for the fifth time, completed secondary education, born and bred in the area near the capital city. She came here to live with husband’s parents temporarily].

However, a woman stated that under the table charges should be discouraged, but she was quick to point out that such malpractice does not exist in this facility. The meaning around this statement may denote that reports of such malpractices may have reached her or had once been a victim in either this study facility or somewhere else. Woman later became uncomfortable to discuss more on this issue. It may seem that sometimes it becomes difficult for women to express their feelings, especially when it comes to sensitive issues like this. Sensitive issues like malpractices had been difficult for women to go deeper, probably due to fear of insecurity. The Gambia Government declared free maternity and under-five child care services for Gambians since over 5 years now, but there may be problems in this particularly

for staffing adequacy and motivation, availability of essential resources for quality care amongst others. An assessment on national delivery exemption in Ghana [103] cautioned that the potential for this to translate into reduced mortality for mothers and babies fundamentally depends on the effectiveness of its implementation and the actions taken to ensure quality of services. Furthermore it has been stated that when designing the exemptions policy [103], careful consideration should also be given to staff motivation and the role of different providers, as well as quality of care constraints. With free maternity care, there is potential for institutional deliveries to increase and therefore increase of work-load on the scarce midwives. It is possible with a more enabling environment and attractive incentives to motivate staff in rural settings [104], the issue of under-the-table charges may substantially decrease, if there is any, coupled with good supervision and monitoring of care provider practices.

It is surprising to know that some of the women feel so dissatisfied with attention being given to them in the delivery ward. A woman in the focus group discussion explains her encounter: *“I arrived in labour pains in the health centre. I found a male nurse on duty playing music and singing. He gave me a bed but did not examine me until when I was nearing delivery, and then I called him to come and help me. But to be sincere, he was not helpful to me [a young woman].*

Another woman who refused to narrate her encounter with the facility only voiced that if she got pregnant again, she will not come to deliver in this facility [a young multiparous woman from Soma Town]. Health care providers may be doing well to the best of their ability under the circumstances in which they work, but these complaints and frustrations are food for thought, need reflection. The approaches of some of the health care providers could sometimes be unprofessional.

One young mother from Soma in almost a crying mood narrates: *“I arrived at the health centre with almost unconsciousness, and my mum called the nurse to come and help. But the nurse on duty responded that ‘we are Christian and should therefore wait, till later’. My mum had to hire a taxi and took me to Farrafenni (AFPRC) hospital [a multiparous young mother from Soma].*

It was very unfortunate that a religious dimension was brought into the care of this helpless woman. Though very shocking, such attitude may be very rare occurrences this facility. Women should not in any way be denied health care because of their religious affiliations or religious beliefs. Such a practice is grossly unethical and unprofessional, as this can reduce service utilization by those who really need it. The relationship between religious doctrine, personal conviction, and sexual and reproductive health is at times problematic, and has been shown to inhibit utilization and sometimes provision of essential, even life-saving interventions [94], and as a matter of fact personal conviction as a rational for failing to provide care must never come into the arena of pregnant and laboring women. Maternity care services tends to touch the emotional, cultural, sensitive and in some environments, religious areas of childbirth.

#### **MONITORING AND SUPERVISION:**

Evidence from programme evaluation and research studies in various countries suggests that facilitative or supportive supervision promotes service quality [105]. Monitoring and supervision has the advantage to motivate health care providers to adhere by the rules such as standards, protocols and guidelines which are evidence-based. It will also make them feel that they are valued, recognized and appreciated.

#### **Providers' views:**

Staff supervision has been well cited. Staff are of the view that regular supervision need to be instituted, both at facility and regional level, as this in their view may stand as a motivation for health care providers and other workers in the health care delivery system.

*“Staff supervision should be strengthened at both health facility and regional level, to improve working environment and for motivation” [both midwife expatriate and nurse auxiliary].* Regular supervision may address the issue of health care providers' non-requisition of antiseptics despite their availability in the pharmacy unit store (as mentioned under “supplies and medicines”).



## **TRAINING NEEDS:**

Although not directly linked to critical practices for quality intra-partum care, in-service training could bring about technical competence of those who provide care to women in labour and delivery.

### **Providers' views:**

Training needs had also been a recommendation by the health care providers. A midwife also stated that it is ideal for all health care workers including cleaners to be trained on infection control practices. Infection control is essential to the prevention of infection not only from one laboring woman to another, but preventing infection to the health worker or health worker's family members at home. This midwife opined that some health care providers and cleaners do not seem to care much on infection control when dealing with blood and blood products, for example. Midwives also recommend regular in-service training on labour care. Some form of in-service training had also been voiced out for nurse auxiliaries in labour care and basic nursing functions. Training including in-service training is important, as it also helps care provider keep abreast with latest evidence-based practices and improve competence. Harvey and colleagues [106] stated that until most providers are sufficiently competent to be considered truly skilled attendants, an increase in the percentage of women delivered by "health personnel" may be less robust indicator of progress toward reducing maternal mortality than we once believed. It is possible that in-service training on interpersonal communication skills may be useful for all those who care for women in labour, as should by evidence on poor attitude and poor communication skills in some of the health workers in women's testimonies.

### **Women's views:**

The session brought out the issue of competence. Some women opined that some of the health care providers in the delivery ward are incompetent. These women therefore concluded that if a health worker did not know how to care and deliver a woman in labour, she or he should call for help. It was noted that some of the health care providers in the delivery ward are nurse auxiliaries; some among them may have very little or no practical experience to handle cases

of labour alone. It may be deduced that women want the reassurance that they are dealing with professionals who have a full and thorough knowledge of the skills and procedures. To reducing both maternal mortality and morbidity at an acceptable level, it is essential for health care providers to be adequately competent in managing the complications most responsible for maternal deaths [106].

#### **EVACUATION OF EMERGENCIES TO HIGHER LEVEL OF CARE:**

Since a comprehensive emergency obstetric care could not as yet be available in this major health centre, an improved referral mechanism may be of importance when evacuating obstetric cases to hospital. The health facility has only one ambulance for this service.

#### **Providers' views:**

A midwife lamented on the provision of a second ambulance and an additional driver, so that when one is away, the second ambulance is at hand. Indeed with the present condition of the facility as almost a transit point for even most of the referrals brought from the satellite facilities in the Health Region, it is ideal for both a second ambulance and a second driver. Logically, this appear ideal since comprehensive emergency obstetric functions cannot be carried out in this health facility, to reduce workload on a single driver and vehicle, in addition to avoidance of delay of a possible referral case, if the single ambulance is away.

#### **AVAILABILITY OF BLOOD FOR TRANSFUSION:**

In investigating quality of care, circumstances that are community/ or consumer-related may need to be put into account. Some vital, life-saving care services could only be made available to women if community members and partners of women participate as partners in the improvement of the health of women and neonates. Typical example is the issue of availability of blood for transfusion, although health care providers have also a vital role in the motivation of community members to freely volunteer to donate blood.

**Providers' views:**

Anaemia is a major public health problem in pregnant women in the developing countries. A small loss of blood in an anemic laboring woman may be detrimental to both her life and that of the unborn baby. Midwives are of the view that relatives and other community members are not forthcoming to donate blood to women who urgently need it. This scenario may increase referrals to hospital, where (hospital) at times stock of blood may not be available for a referred woman for transfusion. In essence, even at hospital level, donors are needed to save women's lives. Possibly effective awareness-raising community activities if well designed, may help reduce the challenge.

**PERCEIVED QUALITY OF CARE:**

Health care providers may be concerned with technical quality, but the perceived quality of care by women may contribute to increased use of maternity care services, and possibly an improvement of care on offer. The overall discussion on women's and health care providers' views shows that health-seeking behavior and perceived quality are not necessarily based on health care provider's perspective, but rather on women's perspective of quality as mentioned by World Health Organization [94].

**Women's views:**

As discussed on good reception earlier, women have said that their expectations were met. Women may have concerns for giving a negative response, amongst other things.

*"I believe my expectations were met, hence injection was given to me and that was good for me [a Fulani woman, age: 30 years, had a child for the third time].* A woman clearly stated that good care is given in a facility rather than home delivery, and therefore her expectations were met for regular attention was given to her [woman in her own words]. One woman furthermore stated that her expectations were met since she was able to know from the nurses that she was in labour.

On the other hand, some women were able to narrate their frustrations when they came to the delivery ward. These women were of the view that their expectations were not met. One

salient issue that came out from a woman was that when she came, the first thing she expected to be done for her was to give her a bed and other admission procedures, but that was not done until the arrival of the senior nurse or doctor. This incident may suggest that sometimes untrained personnel (e.g. inexperienced nurse auxiliary) are left in the ward alone. Such personnel because of no formal or practical experience may have no choice but to call any nurse, midwife or doctor around for assessment and decision-making. Shortages of staff seem to be a major challenge in this facility.

Expectation from a woman in the exit interview suggest that women want a variety of services to be offered in Soma major Health Centre that would reduce their travel to higher levels of care (hospital) for services. This woman stated that during her antenatal period, she expected not only blood pressure and temperature checks, but also scanning during her pregnancy period, denoting that scanning facility is not available in this major health centre. According to Linder-Pelz's patient satisfaction theory, patient satisfaction with health care, as an attitude, is based on the summation of the very subjective assessments of the dimensions of the care experience [96]. These dimensions in the view of Linder-Pelz [96] can include interactions with providers, the ease of access, the burden of costs, and the environmental issues such as cleanliness of the health care facility.

Although satisfaction was indicated, some relate satisfaction to blood pressure checks, setting up of intravenous fluids and giving of injection. *"My blood pressure and temperature was checked, something was placed on my abdomen, and then I was seen internally. Then I was told that I was in labour"* [young Fula woman, age: 18 years, had child for the first time, with no formal education. Woman in a hurry to go home, and was to walk a distance to her village with other women, so the interview was discontinued]. There are villages around Soma who have to walk distances to reach the facility for care. In some of these villages the means of transport is either walking on foot or the use of donkey or horse-cart. Commercial vehicles are not available from such destinations. This geographic distance is likely to increase the rates of home deliveries in the hands of unskilled birth attendants. This may conclude that geographic access to reach health facility is a challenge to many women, for they have to travel distances to be able to get supposed skilled care for themselves and their infants, thus increasing risk to maternity problems and problems to their infants.

Two women who had their first children opined that it is good to deliver in the facility, especially if it was the first pregnancy. These women continued that in the facility if problems arise or detected, they could be managed or referred to an appropriate level. Some women also opined that what were good in the facility were the good-looking and friendly nurses, who are helpful.

On the other hand some voiced on what they thought was bad in the facility. A woman who had her first baby and was given a cut to increase vaginal outlet opined that nothing was good in the facility. She stated that the small operation was a bad experience for her, and so she is not happy about that since it was painful.

For those of the women who declared the practices that were bad in the facility therefore opined that there is poor concern for women in the delivery ward as mentioned earlier: cell phone use, asking women to go home and to come back again while in labour, and the utterances of offensive words to a laboring woman.

For those women who declared on what was good in the facility were those who opined that good concern for women could be found in the facility. It is possible that some of those who felt that care given in the facility was good, were not in actual fact ready to express their true feelings for fear of incrimination, or fear of denial for better care if they seek care again. In the overall, some of the women had expressed satisfaction of the care they received.

Health workers have to be aware that women have feelings, and the way they interact with women/ or what they see in the delivery ward may have some impressions on how they perceive quality of care offered to them. A theory known as moments of truth theory, though it belongs to organizational psychology may be applicable to explain this, which states that “every time that we are face-to-face with a customer we are on trial, and that moment of truth, the customer is both judge and jury, and has ultimate power” [107]. In this perspective, the woman as the customer for example may decide not to use the facility again based on how she perceives what she experiences or sees in the delivery environment. For example if health care provider does not appear friendly to the woman, she may conclude that other health care providers may not be friendly too. Another practical example is drops of blood or body fluids in a delivery floor which have not been cleaned: women may probably assume that practices

and procedures are unsafe, which may cause second thoughts about using the facility again. These may be perceived as poor quality of care in the facility.

### **COMFORT:**

Comfort is another dimension of quality as it motivates health care providers, and also enhances the perceived quality and satisfaction of women in labour.

#### **Providers' views:**

As a form of motivation for care providers and also comfort for laboring women, a midwife voiced: *“there is no air conditioner, no television for a better working condition for both we the staff and the women in labour”*. Staff motivation could be crucial for staff retention, particularly in rural areas. Provision of a good and safe working environment, including appropriate equipment and supplies, supportive supervision and mentoring, in order to make these posts professionally attractive, will thereby increase the recruitment and retention of health workers in remote areas [108].

### **8.10 DISCUSSION:**

Health care providers' failure to adhere to infection control practices and poor interpersonal relationships in this study may partly be due to inadequate monitoring and supervision. The high awareness level by most health care providers on evidence-based intra-partum care practices, which are not translated into actual practice, may also be partly due to the inadequate monitoring and supervision, and the challenges they face on the availability of the required resources for conduct of such practices. Women need companionship at birth, as this may help allay fears and contribute towards reduction of pain during labour and delivery. Health care providers seem to be willing to give companionship at birth or allow relatives to give social support and birth companionship, but they have concerns for the space of the delivery ward, which they viewed need some adjustment to help enhance privacy and confidentiality. Women need a variety of services that would help reduce their travel to another level of care. Interestingly, training needs have been pointed by some health care providers and women, particularly for nurse auxiliaries as a way to improve competence in labour and delivery care. Training on infection control practices have been mentioned by

health care providers for all health workers assigned to the delivery ward, including the cleaners. Women also have concerns for the cleanliness status of the delivery ward and its environment. Women need sufficient education on their health and labour. Women opined that education sessions given at the antenatal clinic are weak and ineffective. This may mean that at the delivery ward, health care providers need to provide relevant information to women on their labour status and health. Women want to be assessed by skilled care providers who when they come to the delivery ward will give them the necessary assessment and care, but not be asked to wait for another care provider, which sometimes takes a long waiting. Women want to be accorded the respect and dignity they require when they come for labour and delivery care.

The issues and problems identified in this study have implications on laboring women and the quality of care they receive. The findings here elucidates that perceived quality is not necessarily based on health care providers' perspective, but rather on women's perspective of quality, as asserted by WHO [94].

**8.8 Conclusion:** Problems of staff attitudes, poor communication /interpersonal skills, inadequate midwives, insufficient resources, supplies, equipment; medicines for maternity care have been mentioned by both the health care providers and women. The staffing audit therefore concludes that there is an acute shortage of skilled care providers. The audit shows that there are seven midwives who work in the delivery ward full-time, two of whom are expatriates and when contract completes, their replacement tend to take some time for another batch of expatriates; thus compounding the acute staff shortage on midwives.

Medicines such as magnesium sulfate were found to be unavailable. Antiseptic lotions were found to be unavailable in the delivery ward, although stock was available in the pharmacy, meaning that health care providers are not asking for it. There is no bucket in the delivery ward for de-contamination of instruments, health workers improvise with an inappropriate bucket for this purpose. Women want to be treated with respect and dignity, women want to be treated equally, and also want to be informed on progress in their labours. The non-functionality of the operation theatre and the erratic power supply, and perceived inadequate cleanliness of the delivery ward and its environment had been well articulated by some of the women in both the exit interviews and focus group discussions.

## 9.0 CHAPTER 9: GENERAL DISCUSSION

**9.1 Main findings:** It has been recommended that a more effective resource allocation, complemented by efforts to implement only those practices that are effective, should be priority to improve the quality of maternity services [46]. Furthermore, to reduce maternal deaths dramatically, all women need access to high quality delivery care with at least three elements: skilled care at birth, emergency obstetric care and a functioning referral system. Therefore, evidence based practices have been found to have potential to improve the quality of maternal care services [6].

The results of the quantitative part of the study show that practices which are demonstrably useful and should be encouraged [6] are uncommon: use of partograph throughout labour was only 13 [12.9 %], foetal heart monitoring on admission only was higher [74 (73 %)], whereas that of monitoring every four hours was only observed in 24 [24 %]; women were allowed to take oral fluids in 50 [49%] of the women; all women [101 (100 %)] admitted in labour were instructed to be in lithotomy position during the time of delivery. To be allowed movement up and about was observed in 71 [70 %] of the women. This means there was no impressive freedom in position and movement throughout labour as recommended.

In 100 [99 %] of the deliveries observed the instruments used were regarded unsterile, hence health care provider uses most of the time bare hands to pick them from a congested autoclave. Sterility of instruments used in labour and delivery care is a highly recommended practice as noted by the WHO. Routine examination of the placenta and membranes to confirm that there were no retained products of conception, which is a recommended practice and should be encouraged [6], was noted in only 20 [19 %] of the women.

Practices which are clearly harmful or ineffective and should be eliminated [6] were common: routine use of supine position was observed in 101 [100 %] of the women; and the post-delivery manual exploration of the uterus was high [n=81, 80 %].

The study indicated that an assessment of vital signs of the women was not impressive since taking and recording of pulse does not seem to be a routine in this facility. Pulse was taken and recorded in only 9 [9 %] of the women; at subsequent assessment, pulse taking and recording was observed in only 14 [14 %] of the women. Taking of temperature and recording was observed in 87 [86 %] of the women on admission; on subsequent assessment, there was no difference, 88 [87 %] of the women had temperature taken and recorded. Taking of blood pressure and recording was observed in all [101] of the women on admission; on subsequent assessment, there was 99 [98%] of the women whose blood pressures were taken and recorded. Monitoring woman's physical and emotional well-being throughout labour and delivery and at end of the birth process, which therefore includes taking and recording vital signs, is a recommended practice, which should be encouraged [6].



Although information giving to mother on stage of labour [n=101, 81], and information to mother about vaginal examination to be performed [n=101, 77] seem to be high, unfortunately information on the results of the examination at time of admission was very low [n=101, 3]. Giving women as much information and explanation as they desire is a practice which is found to be demonstrably useful and should be encouraged [6].

Incomplete delivery set has been found to be common in this labour, since only 2 [2 %] of the delivery sets had been found to be complete. But assembly of the delivery set before delivery starts has been found to be high [n=84, 83 %]. Appropriate and complete procedural sets are also critical to the quality of intra-partum care, especially for normal labour and delivery care.

There were poor aseptic measures and therefore the sterility of scissors used to even cut the baby's cord has to be questioned. Sterility in the cutting of the cord is a demonstrably useful practice and should be encouraged [6], unfortunately the practice for this procedure is substandard in this facility.

Baby drying with warm towels or clothes before wrapping is common [n=97, 96 %]. Furthermore, 99 [98 %] of the babies had been wrapped in dry towels or clothes after being dried. This practice on the newborn denotes that the prevention of hypothermia in the newborn was very good, as it is a practice which is demonstrably useful and should be encouraged. Although immediate bathing of the baby has not been observed in this facility, which could be regarded as a positive step for neonatal survival; however, there may be concerns on when do women or relatives start bathe of the baby at home and how it is done in the home environment. Placing the newborn on the abdomen of the mother immediately after birth surprisingly was found in only 15 [n=101] of the women. Incomprehensibly, routine examination of the newborn for any abnormality was not a culture in this facility: of all the deliveries observed, only 4 [n=101] babies had been routinely observed and examined for any abnormality. It has been observed, although not assessed in this study, breastfeeding of the newborn is being encouraged in this facility, although as observation, health care providers seem not to adhere to supporting the women to give the breast within at least one hour of delivery.

Although not part of WHO recommended evidence-based practices categorization for intra-partum care [6], it is a national recommendation according to policy, and it is also a strong recommended practice in similar WHO documents [73, 74]; to instill tetracycline eye ointment or any recommended antimicrobial in both eyes of the newborn immediately after birth as prophylaxis. Out of the 101 deliveries observed, only one (1) baby had tetracycline instilled in both eyes.

The Ministry of Health and Social Welfare under the auspices of Reproductive and Child Health Programme Unit of The Gambia had finalized a National Maternity Care Guidelines and Service delivery Standards since April 2010, this national document could not be found in

this facility delivery ward or with any staff member. It may be concluded that there is lack of protocols and guidelines on normal delivery, absence of active supportive supervision, with acute staff shortage especially in the afternoon and night shifts.

The results of both quantitative and qualitative data show some inconsistencies between actual practices during intra-partum care and views of health care providers about failure to apply evidence-based intra-partum care.

The qualitative part of the study revealed that most of the health care providers were aware of some of the evidence-based recommendations, but not practicing them as recommended. Most of the health care providers are not aware of the presence of The Gambia Maternity Care Guidelines, and so the document is not available in the facility's delivery ward or anywhere in the facility. Health care providers therefore give care based on experience and knowledge background, as the qualitative data indicates.

The high awareness level by most health care providers on evidence-based intra-partum care practices, which are not translated into actual practice, may also be partly due to the inadequate monitoring and supervision, and the challenges they face on the availability of the required resources for conduct of such practices.

Health care providers' failure to adhere to infection control practices and poor interpersonal relationships in this study may partly be due to inadequate monitoring and supervision. Antiseptic lotions were found to be unavailable in the delivery ward, although stock was available in the pharmacy, meaning that health care providers are not asking for it. There is no bucket in the delivery ward for de-contamination of instruments, health workers improvise with an inappropriate bucket for this purpose.

In-depth interviews with health care providers show that harmful and sometimes uncomfortable practices were frequent even though evidence does not suggest their benefits. Lithotomy position is very frequent in women admitted for labour and delivery. Support during labour and delivery, and good inter-personal relationships were infrequent. Women need companionship at birth, as this may help allay fears and contribute towards reduction of pain during labour and delivery. Health care providers seem to be willing to give companionship at birth or allow relatives to give social support and birth companionship, but they have concerns for the space of the delivery ward, which they viewed need some adjustment to help enhance privacy and confidentiality. Women have the right to privacy [6], and therefore such an entitlement need to be made available to them, where possible.

Findings of the study indicated areas in health centre-based intra-partum care that need special attention according to testimonies of women. These areas include the staff attitude, interpersonal relationship, cleanliness of the delivery ward, availability of supplies, equipment and medicines, which are essential for quality intra-partum care. Also it was concern of the women that serious monitoring of women in labour and a functioning operation theatre is fixed to save the lives of women and their babies.

Some women viewed that health care workers need to redouble their efforts to treat all women in dignity and respect, irrespective of ethnicity, status or religious background. Concern has also been raised by women on staffing of the delivery ward; some are of the view that the number of midwives in the delivery ward particularly during night shifts is not sufficient. Women may be right to state this, as midwives being the prototype of skilled birth attendants, are fundamental components in the system of intra-partum care [100], and this staff shortage has been realized in the staffing audit, using The Gambia Human Resource Plans and Training Schedules [57] as the yardstick for this conclusion.

Women need a variety of services that would help reduce their travel to another level of care. Interestingly, training needs have been pointed by some health care providers and women, particularly for nurse auxiliaries as a way to improve competence in labour and delivery care. Women want to be assessed by skilled care providers who when they come to the delivery ward will give them the necessary assessment and care, but not be asked to wait for another care provider, which sometimes takes a long waiting. Health care providers need to be adequately competent in managing the complications most responsible for maternal deaths [106], if they occur. Training and in-service training has potential to help health care providers keep up-dated with the best available evidence-based practices, and therefore improve competence and enhance quality of care.

## **9.2 Issues of validity, reliability and trustworthiness of results:**

Validity, reliability and trustworthiness of results and findings have been discussed in detail in Chapter 6. It has been also mentioned earlier that both quantitative and qualitative methods have been used in this study, the triangulation approach. But it is of relevance to further discuss that this approach has been known to complement each other, and also there are other questions that quantitative data may not answer adequately, that qualitative data may attempt

to do. It is more useful to see both methods as partners and mutually dependent rather than a divorce between the different methodologies. It is said that quantitative research in reality represents an approach that adopts a positivist stance, drawing upon the natural science approach, whereas qualitative on the other hand involves detailed description of social settings investigated and provides a context for understanding subject's interpretation of events. The most fundamental characteristic of qualitative research is its expressed commitment to viewing events, actions, norms, values, feelings for example, from the perspective of the people who are being studied, therefore falling within a naturalistic framework. Triangulation has been found to be a powerful way to assess validity of results in a study [72]. This combination of methods was therefore necessary as it has the advantage to enhance the validity and reliability of study findings. Gathering raw data from its natural environment may also contribute to the validity, reliability of the results and findings.

Although the ultimate goal was to come out as much as possible with findings that are reliable and valid, however, there will still be some biases and confounders during the execution of the study, whether consciously or unconsciously that may affect the validity, reliability and trustworthiness of findings.

It may be concluded that our background as health professionals, in addition to being familiar with the study site set-up may have both negative and positive effects on the results (internal validity). Although this study has a small study sample [n=101] for the quantitative component, it may not be representative as mentioned earlier, however these findings may still be applicable to other rural settings and be generalized hence they may not reflect anything different from what is the true picture in other rural facilities of The Gambia, but one may never be certain on what exist in other facilities.

### **9.3 Comparisons to similar findings:**

Several similar studies had found that most practices which are clearly harmful or ineffective and should be eliminated were common: Gambia [8], Jordan [39], Egypt [41], Colombia [43], and Iran [99]. In The Gambian study [8], failure of health care to inform women about procedures and not involving them in their own care was common practice. Poor interpersonal communication has also been mentioned in a Botswana study [38]. Such findings were also found in this study, in addition to the lack of The Gambia Maternity Care Guidelines [109] which had been available since the year 2010.

In the Egyptian study [41], it was realized that protocols were available and followed for obstetric emergencies, but no protocols were available for normal labour at the study site. There was also an absence of explicit service delivery guidelines in the study site in the Nigerian study [37].

Whereas in a previous Gambian study [8], most health care providers were unaware of the intra-partum evidence-based care recommendations [6], surprisingly in this present study, most health care providers were aware of these practices, although this high knowledge has not been translated into actual intra-partum care, as results indicated. This may mean that sometimes having knowledge and awareness on standard practices does not necessarily mean conduct of practice.

As this present study was conducted in a rural setting, a staffing audit was conducted, since adequate staffing impacts on quality of care, but the previous Gambian study [8] did not conduct an audit using the national document [57] as a proxy to help make conclusions on the state of staffing. But deficiencies in supplies medicines, equipment and poor interpersonal communication has been mentioned in [8], and [41]. Although the Botswana study [38] did mention poor interpersonal communication and staffing constraint, as was also mentioned in the Iranian study [99], however a staffing audit was not conducted, but the shortage of equipment and medicines and logistics was not an issue. A staffing audit was not also conducted in [99], as was also not realized in [8], [39], and [43], but this present study conducted this. However, it [38] did cite the need for in-service training for care providers and facilitative supervision, has been equally identified in this present study. However, the Nigerian study [37] opined that availability of equipment and midwives are necessary but not sufficient to guarantee performance of tasks and ensure improved quality of care. It may be of importance to note that the Nigerian study did not use the WHO checklist as the basis for the development of the assessment methods, but it covered the salient areas of combined methods.

Similar to the findings of this present study, the Iranian study [99] did suggest structural and organizational modifications of the delivery rooms to meet women's need for social support and birth companionship, in addition to the needs for the availability of protocols for labour and delivery care, adherence to infection control practices such as routine hand washing, improve infant examination for any abnormality immediately after delivery, increase in midwifery personnel to reduce workload, and improve communication skills. However, the

Iranian study [99] did not conduct a review of records. There were high levels of interventions, many of which may have not been necessary in this low-risk population [39], as was identified in [8]. Although the Colombia study [43] did interview health care providers, it did not explore women's experiences, preferences and views about care received, which this present study attempted to do. However interventions such as episiotomies [n=29] could be regarded as an issue in this present study, in addition out of the twenty (20) intravenous infusions mounted on labouring women for example, three (3) intravenous infusions were mounted for which no logical reasons for giving them could be found.

Of the 29 episiotomies performed, 28 were first pregnancies, and there was association between parity of women and health care provider's decision to perform an episiotomy, with a significance level of  $p < .001$ ; this may be deduced that first pregnancies are more likely to be given an episiotomy than second pregnancies or higher in this study. The previous Gambian study [8] had an episiotomy rate of 19.8%, and out of 39 women primi-parous women, 19 women were given episiotomy; whereas in this study, out of a total of 43 primi-parous in the study, 28 women were given episiotomy. This present study is even higher than the previous Gambian study [8] which was conducted in a main referral hospital. Similar findings on routine episiotomies were found in studies conducted in Egypt [41], Jordan [39], Colombia [43], and Iran [99]. This present study with a 28 % episiotomy rate out of the total study sample [n=101] could be regarded as unacceptable for this may mean routine episiotomy for first pregnancies, as observed in similar studies. It has been suggested percentage of episiotomies attained in the English trial (10%), without harm to the mother or the infant would be a good goal to pursue [6]. Routine use of episiotomy are practices which are frequently used inappropriately according to the WHO [6], and there should therefore be a good reason for performing it for normal delivery such as foetal distress, insufficient progress of delivery and threatened third degree tear.

More disturbing results were found in the Egyptian study where 93% of primi-parous women were given episiotomies. The percentage of primi-parous women on whom episiotomy was given in the earlier Gambian study out of a total of 39 primi-parous women in the study sample was calculated to be 48% [n=19], whereas in this study it was 65% [n=28], out of a total of 43 primi-parous women in the sample, which confirms again that it is unacceptably high. Similar findings on the rate of episiotomies on primi-parous women have also been mentioned in both the Colombia [43] and the Lebanon [40] studies.

Whereas women had reported concerns for cleanliness of the delivery ward and its environment, poor interpersonal communication, concerns for resources and supplies, support and birth companionship during labour and delivery, similar to the previous Gambian study [8] and the Sri Lankan study [24], the Iranian study [99] mentioned women's satisfaction ratings on cleanliness, lighting and comfort, supplies and equipment and interpersonal communication to be high. However, in a Swedish study [95] on women's evaluation of intra-partum and post-partum care, satisfaction was found to be low (32%) on interpersonal communication and support during labour and delivery, as in the previous Gambian study and this study. The Gambia Maternity Care Guidelines [109] has clearly stated the concern and need for positive interpersonal communication, privacy and confidentiality, cleanliness of the labour environment and the monitoring and support of the labouring woman.

Sometimes entrenched social and legal frameworks, and policies on health care seem to affect practices of health care providers and quality of care, particularly in settings where litigation exist due to presumed bad practice. Interestingly in the Colombia study [43], as mentioned earlier, intra-partum care practices were not led by best available evidence-based recommended practices since health care providers perceive evidence-based medicine with skepticism, and personal experience and authoritarian views of experts still have enormous influence on obstetric practice. The Colombia study identified a widespread belief that routinely using ineffective practices such as enema, perineal or pubic shaving and episiotomy would be seen positively in the event of litigation. This translates that fear of litigation has promoted the use of these practices amongst health care providers, especially doctors. Unfortunately the study only conducted observation of intra-partum care practices and interview of health care providers, but not women who received labouring care in the study sites.

#### **9.4 Distinct nature of this study:**

To enhance the quality of the use of both quantitative and qualitative methods, as mentioned earlier, this study conducted a staffing audit using The Gambia Human Resources for Health National document [57] as the proxy to make evidence-based staffing gap conclusions and not only on the views of health care providers and women participants. The study also made use

of an adapted walk-through-tool (WTT) in an attempt to assess the health centre's readiness for emergency obstetric care, by investigating on structure of not only the delivery ward, but also post-natal ward, general out-patient, the laboratory, and pharmacy units, as they are critically related to intra-partum care quality. The study site being a rural health facility, the WTT had been found to be immensely appealing in the setting. Similar studies cited in the reviewed literature in this document do not seem to conduct an in-depth staffing audit and the use of the walk-through-tool, and this was what this present study attempted to do. To the best of our knowledge, this quality care study is first of its kind on intra-partum care practices conducted on a rural facility in The Gambia, using varied combination of methods and tools. Except the Nigerian study [37], other similar studies in the reviewed literature (i.e. Botswana [38], Jordan [39], Colombia [43], Iran [99], Gambia [8], and Egypt [41] were conducted in hospitals, this present study was conducted in a rural health facility.

**9.5 CONCLUSION:** The quality of intra-partum care in this rural referral major health centre is below standard. Most practices which are clearly harmful or ineffective and should be eliminated were common in this study; therefore most practices were not evidence-based, although there seem to be a high awareness amongst health care providers on these evidence-based intra-partum care practices. The provision of the existent National Maternity Care Guidelines for health care providers who care for women in labour, with supportive supervision and monitoring has potential to enhance quality of care in this rural major health centre. Medicines such as magnesium sulfate were found to be unavailable.

Problems of staff attitudes, poor communication /interpersonal skills, inadequate midwives, insufficient resources, supplies, equipment; medicines for maternity care have been mentioned by both the health care providers and women. The staffing audit therefore concludes that there is an acute shortage of skilled care providers.

#### **9.5.1 Way forward:**

1. The findings revealed that most routine facility practices for normal labour and delivery care deviated from the best available evidence even though most health care



providers are aware of these practices has potential to increase incidence of obstetric problems.

2. The routine practices which are clearly harmful or ineffective and should be eliminated may have negative implications on the health of labouring women.
3. For future research, in the development of the check-list for study on practices on intra-partum care practices, in addition to possibly an updated WHO recommended guidelines on best available evidence-based intra-partum care practices, it may be of relevance to equally use The Gambia Maternity Care Guidelines and Service Delivery Standards in the preparation of the check-list, to practically reflect local situation within rural socio-cultural context.
4. Prevention of hypothermia is equally essential for newborn survival outside facility walls, therefore a quality intra-partum care study tools that would be able to portray an insight into bathing practices of the newborn at home and what sort of information care providers give if any, to these mothers and relatives before discharge would probably be necessary for future research.

## **10.0 CHAPTER 10: GENERAL CONCLUSION AND RECOMMENDATIONS**

It is important to state that not all recommendations in this study come out of the results only, but some are logically derived also from reviewed literature and in consideration of the possible suitable options within the context of geographic location and rural maternal health care:

### **10.1 CONCLUSION**

1. Soma Major Health Centre is expected to be an exemplary facility for all other health facilities in this Health region because it is the referral point for most health facilities in the Region. Instead, it appears not to apply evidence-based intra-partum care practices despite most health care providers in the delivery ward seem to be aware of these evidence-based practices.
2. Health care providers' attitude influences women's expectations and satisfaction of intra-partum care services. Therefore, staff attitude have implications for women's acceptability and use of health centre-based intra-partum care services. The acceptability and use of intra-partum care practices is a priority towards the strategy of the reduction of both maternal and neonatal mortalities and morbidities.
3. Staff attitude, poor interpersonal relationship, use of abusive language towards laboring women, not giving much attention to social support during labour and child birth could contribute to low institutional deliveries in rural communities.
4. If women are not treated with dignity and respect, they are more likely not to come back to the facility for maternity care services, including intra-partum care as indicated by testimonies of post-partum women.

### **10.2 RECOMMENDATIONS**

Based on the analyzed data and the discussion on findings, the study has the following suggested recommendations:

1. Evidence-based intra-partum care practices are crucial for quality intra-partum care. Therefore, health care providers who care for women in labour and delivery need to have a solid knowledge foundation on these recommended practices through the availability and use of The Gambia Maternity Care Guidelines.

There is indeed a compelling evidence to put in place a mechanism for continuing supervision and monitoring of the use of evidence-based intra-partum care practices by health care providers who care for women in labour in this facility. This will help ensure that knowledge on evidence-based intra-partum care practices are put into actual practice. Probably the “**Better Births Initiative**” approach could be very useful in this rural facility to ensure that the practices that are evidence-based are practiced [50]. This approach premise that to provide good quality care and make the experience of childbirth more comfortable for women, health care providers need to ensure that they are guided by the best available research evidence.

2. Recommended infection prevention and control practices are essential for both maternal and neonatal health outcomes. Therefore in no circumstance should infection prevention practices be compromised.

A practical orientation on infection prevention and control for all health care providers and cleaners (orderlies) may be an ideal initiative, enhanced with an established monitoring of infection prevention practices of health care workers who care and attend to women in labour in this facility.

Establishment of a functioning infection control committee in this facility could be of maximal benefit. This may help ensure that infection prevention and control universal precaution measures are adhered to.

3. Cleanliness seems to be a concern in this facility as asserted by both health care providers and post-partum women.

Nurses, midwives, doctors and nurse auxiliaries should all be concerned with cleanliness particularly for the delivery floor, delivery beds, trolleys and other equipment stationed in the delivery ward.

Cleaners (orderlies) need to be given a proper induction on the issue of cleanliness of the delivery ward and its environment, but proper and sufficient supplies and materials need to be provided.

Apart from active supervision on delivery ward cleanliness, an appropriate disciplinary measure could be instituted for those health workers who manifest negligence to the general cleanliness and upkeep of the delivery ward, post-natal ward and its environment.

A way may need to be sought in addressing the issue of the rice cultivation season, just to ensure that cleaners are available at all times. Such a move could have potential to enhance infection prevention and control practices, with the ultimate aim of enhancing the quality of intra-partum and maternity care.

4. Qualitative data demonstrate that interpersonal relationship /communication is a challenge with some of the health care providers, including the cleaners.

Design of an orientation session tailor-made for nurses and midwives, nurse auxiliaries and the cleaners could be of relevance.

This could be strengthened by continuous hands-on monitoring of interaction and communication practices of health workers in this facility.

5. Implementation of evidence-based practices better works with availability of the required resources: supplies, medicines and equipment. The required and appropriate resources need to be made available for intra-partum care practices, but rational use of these limited resources are indeed critical.

It is very essential to singly state that magnesium sulfate must be available at all times for the overall care of pregnant women and women in labour. The antidote of magnesium sulfate, calcium gluconate need also be made available at all times.

6. Special focus and attention is necessary to be given to rural health care services in terms of provision of nurses and midwives (skilled birth attendants) at Central and Regional level.

But at facility level, in the re-deployment of nurses and midwives posted to the facility, priority in this may need to be accorded to intra-partum care services for quality care. As the audit shows, the presence of a highly-skilled birth attendant does not mean that personnel works full-time in the delivery ward. However, the highly-skilled personnel may still be regarded as a skilled birth attendant who at some moments cares for women in labour in the facility.

7. Birth companionship at birth is an evidence-based recommended practice, however for this to work well in this facility; adjustment of space of the delivery ward may need to be considered. It may therefore be logically sound to state that ways may need to be sought on expansion of the delivery ward.

In addition, however, an expansion of the post-natal ward could also be made in addition to that of the delivery ward. These expansions will also help enhance privacy and confidentiality for women.

8. Some basic theoretical and practical knowledge is appropriate for all health care providers who give care to laboring women.

For this reason, a training that include hands-on may be ideal for the nurse-auxiliaries of this facility. Such training must include interpersonal communication techniques.

9. Regular supervision and monitoring of overall facility activities, with specific focus on maternity care services have been considered vital, as expressed by both health care providers and post-partum women in this study. This is needed at both Regional and Facility management levels.

Supervision and monitoring of services has the added advantage of motivating health care workers. In turn, it is possible for motivation to have the positive outcome of health care providers to render quality care in all facility's service areas, which includes maternity /intra-partum care services.

10. To improve the overall referral services, there is genuine evidence that a second ambulance and driver is ideal with the view that if one ambulance and driver is away on a referral trip, another back-up ambulance and driver is on standby.

Availability of a second ambulance and driver also has the opportunity to reduce supposed workload and burden on a single driver and ambulance.

11. Design of a reliable oxygen supply mechanism may be ideal such that even without electricity, oxygen could be used in the resuscitation of women and neonates who are in need. Provision of a functional manually operated suction machine is also of value such that without electricity, lives of needy neonates could be saved.

12. Provision of a vacuum extraction set and a manual vacuum aspirator is ideal for labour care and post-abortion /safe removal of products of conception. All skilled care providers (nurses, midwives and doctors) who care for laboring women may need to be given hands-on training on the competent use of this equipment.

13. Reorganization of the autoclave in the way the instruments are arranged could be an essential factor, and consider if procedural packs could be prepared before placing them in the machine for sterilization. This will aid health care providers to know which ones are ready for use. Another possible alternative could be the provision of a more spacious autoclave which would allow sizable drums, so that when procedural packs are wrapped in clean cloth could be placed in such drums ready for sterilization. Such a move may allow sets for delivery and suturing for example come in sterile packs rather than just picking required instruments for specific tasks from a heap of instruments.
14. As electricity supply is very erratic, to at least enhance lighting for deliveries conducted at night, a reliable lighting device such as solar lighting could be a cost-effective alternative, thus adding value to quality of care.
15. The functionality of the operation theatre seems to be a need for women in this Health region since the opening of this strategically-located health facility. In addition to the provision of a comprehensive obstetric care services, a mechanism may need to be put in place that will increase institutional deliveries for skilled care, hence there may be more home deliveries than institutional deliveries in facilities of this Health region.
- In conclusion:** there is ample evidence to conclude that attention needs to be given to this facility, as a rural Regional referral facility. Quality intra-partum care that is evidence-based, fortified with provision of a comprehensive emergency obstetric care services is of very high priority for this rural facility. Manifestation of concern for rural women and rural maternal health care may require that maternity care policy and maternity care guidelines support in practical terms the provision of quality obstetric care that is led by best available evidence, since **free maternity care** may not be enough, through provision of the required essential resources.

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## **ANNEX 1: CLASSIFICATION OF PRACTICES IN NORMAL BIRTH:**

### **CATEGORY A: Practices which are demonstrably useful and should be encouraged:**

1. A personal plan determining where and by whom birth will be attended, made with the woman during pregnancy and made known to her husband / partner and, if applicable, to the family.
2. Risk assessment of pregnancy during prenatal care, re-evaluated at each contact with the health system and at the time of the first contact with the caregiver during labour, and throughout labour.
3. Monitoring the woman's physical and emotional well-being throughout labour and delivery, and at the conclusion of the birth process.
4. Offering oral fluids during labour and delivery.
5. Respecting the women's informed choices of place of birth.
6. Providing care in labour and delivery at the most peripheral level where birth is feasible and safe and where the woman feels safe and confident.
7. Respecting the right of women to privacy in the birthing place.
8. Empathetic support by caregivers during labour and birth.
9. Respecting women's choice of companions during labour and birth.
10. Giving women as much information and explanations as they desire.
11. Non-invasive, non-pharmacological methods of pain-relief during labour, such as massage and relaxation techniques.

12. Foetal monitoring with intermittent auscultation.
13. Single use of disposable materials and appropriate decontamination of reusable materials throughout labour and delivery.
14. Use of gloves in vaginal examination, during delivery of the baby and in handling the placenta.
15. Freedom of position and movement throughout labour.
16. Encouragement of non-supine position in labour.
17. Careful monitoring of the progress of labour, for instance by the use of the WHO partograph.
18. Prophylactic oxytocin in the third stage of labour in women with a risk of postpartum haemorrhage, or endangered by even a small amount of blood loss.
19. Sterility in the cutting of the cord.
20. Prevention of hypothermia.
21. Early skin-to-skin contact between mother and child and support of the initiation of breastfeeding within 1 hour postpartum in accordance with the WHO guidelines on breastfeeding.
22. Routine examination of the placenta and the membranes.

**CATEGORY B: Practices which are clearly harmful or ineffective and should be eliminated:**

1. Routine use of enema.
2. Routine use of pubic shaving.
3. Routine intravenous infusion in labour.
4. Routine prophylactic insertion of intravenous cannula.
5. Routine use of supine position during labour.
6. Rectal examination.
7. Use of x-ray pelvimetry.
8. Administration of oxytocics at any time before delivery in such a way that their effect cannot be controlled.
9. Routine use of lithotomy position with or without stirrups during labour.
10. Sustained, directed bearing down efforts (Valsalva manoeuvre) during the second stage of labour.
11. Massaging and stretching the perineum during the second stage of labour.
12. Use of oral tablets of ergometrine in the third stage of labour to prevent or control haemorrhage.
13. Routine use of parenteral ergometrine in the third stage of labour.
14. Routine lavage of the uterus after delivery.

15. Routine revision (manual exploration of the uterus) after delivery.

**CATEGORY C: Practices for which insufficient evidence exists to support a clear recommendation and which should be used with caution while further research clarifies the issue:**

1. Non-pharmacological methods of pain relief during labour, such as herbs, immersion in water and nerve stimulation.
2. Routine early amniotomy in the first stage of labour.
3. Fundal pressure during labour.
4. Manoeuvres related to protecting the perineum and the management of the foetal head at the moment of birth.
5. Active manipulation of the foetus at the moment of birth.
6. Routine oxytocin, controlled cord traction, or combination of the two during the third stage of labour.
7. Early clamping of the umbilical cord.
8. Nipple stimulation to increase uterine contractions during the third stage of labour.

**CATEGORY D: Practices which are frequently used inappropriately:**

1. Restriction of food and fluids during labour.
2. Pain control by systemic agents.



3. Pain control by epidural analgesia.
4. Electronic foetal monitoring.
5. Wearing masks and sterile gowns during labour attendance.
6. Repeated or frequent vaginal examinations, especially by more than one caregiver.
7. Oxytocin augmentation.
8. Routine moving the labouring woman to a different room at the onset of the second stage.
9. Bladder catheterization.
10. Encouraging the woman to push when full dilatation or nearly full dilatation of the cervix has been diagnosed, before the woman feels the urge to bear down herself.
11. Rigid adherence to a stipulated duration of the second stage of labour, such as 1 hour, if maternal and foetal conditions are good, and if there is progress of labour.
12. Operative delivery.
13. Liberal or routine use of episiotomy.
14. Manual exploration of the uterus after delivery.

## ANNEX 2.1 STAFFING AUDIT GUIDE: SOMA MAJOR HEALTH CENTRE: Tool

1

: For maternity and delivery care

	<b>CADRE</b>	<b>ACTUAL</b>	<b>MOH recommended</b>	<b>No. work in labour/delivery ward</b>	<b>GAP</b>
	Doctor				
	Doctor with surgery skills				
	Certified Midwife				
	Enrolled Midwife				
	Community Midwife				
	Registered Nurse				
	Enrolled Nurse				
	Community Health Nurse				
	Community Nurse Attendant (Aux. nurse)				
	Nurse Anaesthetist				
	Peri-operative Nurse				
	Laboratory Technician				
	Laboratory Attendant				
	Pharmacy Technician				
	Pharmacy Assistant				
	Cleaner (orderly)				
	Ambulance Driver				

## ANNEX 2.2 THE ROOM-BY-ROOM WALK-THROUGH TOOL (WTT):

### ASSESSMENT FOR EMERGENCY OBSTETRIC CARE: (Infrastructure, medicines, supplies and others) Tool 2

1	<b>GENERAL OUT-PATIENT:</b> Observe cleanliness of the area (infection prevention; disposal of sharps and needles; check completeness of registers; observe!).	AVAILABLE:		COMMENTS:
		YES	NO	
	wheel chair, trolley or stretcher			
	Orderly to transfer woman			
	Emergency evaluation area			
	Emergency medicines and IV solutions (if emergency box, check on inventory monitoring).			
	BP machine, stethoscope, thermometer Qty:			
	<b>Sterile gloves</b>			
	Oxygen cylinder with face mask*			
	Cylinder carrier and key*			
	Examination table with privacy			
	Waiting room with seats for relatives			
2	<b>LABOUR /DELIVERY ROOM:</b> Observe cleanliness of the area (infection prevention; disposal of sharps and needles; verify if blood-soaked materials are processed quickly; check completeness of registers; observe!).			
	At least 10 delivery sets			
	Sterile gloves, gowns, gauze			
	Clean linen sets			
	Sterilized forceps sets			

	Vacuum extractor-functional Qty:			
	Laceration repair pack			
	Suction apparatus with suction tube Qty:			
	Oxygen cylinder with face mask*			
	Cylinder carrier and key*			
	Lighting (electricity)			
	Emergency medicines-within expiration limits (if emergency box, check on inventory monitoring).			
	Antiseptics			
	BP machine, stethoscope, thermometer Qty:			
	IV fluids, stands, needles and cannulae			
	Mucus extractor for neonates Qty:			
	Delivery bed with lithotomy stirrups Qty:			
	Baby weighing scale			
	Ambu bag for new born			
	Bucket for de-contamination			
	Sharps disposable container			
<b>3</b>	<b>CHANGE/SCRUB ROOM:</b> Observe cleanliness of the area (infection prevention; observe!).			
	Operating theatre gowns			
	24-hour clean running water			
	Wash basin with elbow or knee tap			
	Scrub brushes and soap			
	Caps and masks			
	Operating theatre shoes / shoe covers			
	Wall clock			

<b>4</b>	<b>OPERATION THEATRE:</b> Observe cleanliness of the area (infection prevention; disposal of sharps and needles; verify if blood-soaked materials are processed quickly: check completeness of registers; observe!).			
	At least 5 sets of sterilized caesarean delivery instruments Qty:			
	Sterilized suction tubing and nozzle			
	Theatre lamp with spare bulbs			
	Suction machine			
	Emergency medicines, with list showing quantity and expiry dates (if emergency box, check on inventory monitoring).			
	Resuscitator /ambu bag			
	Laryngoscope with battery cells and spare bulbs			
	Endotracheal tubes			
	Anaesthesia machine with spare cylinders of oxygen and nitrous oxide			
	Anaesthetic agents, with list showing quantity and expiry dates			
	Spinal needles, epidural kits			
	Antiseptic for skin preparation			
	Suture materials, with list showing quantity			
	IV stands, fluids, needles and cannulae			
	BP machine, stethoscope, thermometer Qty:			
	Sterilized linen packs			
	Stretcher or trolley			

<b>5</b>	<b>OBSTETRIC WARD:</b> Observe cleanliness of the area (infection prevention; disposal of sharps and needles; check completeness of registers; observe!).			
	Emergency medicines (if emergency box, check on inventory monitoring).			
	BP machine, stethoscope, thermometer Qty:			
	IV stands, fluids, needles and cannulae			
	Oxygen cylinder with face mask*			
	Cylinder carrier and key*			
	Sharps disposal containers /rubbish bins			
	Beds with mattress covered with clean rubber sheet, bed sheets and pillow			
	Bed side locker			
	Bench or chair for attendant			
<b>6</b>	<b>LABORATORY / BLOOD BANK:</b> Observe cleanliness of the area (infection prevention; disposal of sharps and needles; check completeness of registers; observe!).			
	Blood type, cross-matching, reagents for screening syphilis, HIV and others			
	Blood collection items and bags			
	Centrifuge and test tubes			
	microscope			
	Register for recording events			
	refrigerator			
<b>7</b>	<b>AUTOCLAVE ROOM:</b> Observe cleanliness of the area (infection prevention; check completeness of registers; observe!).			
	Autoclave machine with temperature and			

	pressure gauges			
	Supply of indicator paper			
	Reliable and safe electric connection or supply of kerosene oil/gas or solar power			
	Table with marked areas indicating sterile and non-sterile areas			

**Adapted from: Gill, Bailey & Waxman, 2005:A tool for assessing "readiness" in emergency obstetric care: the room-by-room "walk through"**

**\*Pharmacy:** this is not included in the tool. It is ideal visit the place: check on inventory system; stock management system; find about replenishment when supplies drop. Verify on documentation.

\*clarify and/or verify on service providers' initiative on making the service areas functional.

**SUMMARY COMMENTS:**

## ANNEX 2.3 INTRAPARTUM PRACTICES CHECKLIST-Soma study

### Tool 3

#### SECTION A: Demographic Characteristics

Case no. .... Date of admission: ..... Time of admission: .....hrs

Time of delivery: ..... hrs Time of discharge after delivery: .....hrs

Initial of observer:

Question no.	Question:	Coding category:
101	Age of woman	Complete in years:.....
102	Gestational age (weeks)	.....weeks
103	Marital status	Single: 1 Married: 2 Divorced: 3 Widowed: 4 Other: 5
104	Obstetric history: 1. No. of babies born alive 2. No. of babies born dead 3. No. of abortions	1.) / / 2.) / / 3.) / /
105	Parity: 1+2	Write in box: / /
106	What is the highest level of education you attained?	None: 1 Primary: 2 High/Secondary: 3 College: 4 University: 5 Other: 6
107	What is your occupation?	Farmer: 1 Housewife: 2 Civil servant: 3 Petty trader: 4



		Student: 5 Other: 6 : specify.....
<b>SECTION B: OBSTETRIC HISTORY:</b>		
101	Number of babies born alive	.....
102	Number of babies born dead	.....
103	Number of abortions	.....

**SECTION C: FACILITY ADMINISTRATIVE PROCEDURES:**

**RECORDING VITAL SIGNS:**

Q.101	Measurement of blood pressure? If yes, write in box	/ / Yes: 1 No: 2
102	Measurement of temperature? If yes, write in box	Yes: 1 No: 2
103	Measurement of pulse? If yes, write in box	Yes: 1 No: 2

**DECISION ON THE STAGE OF LABOUR:**

104	Antenatal care available?	Yes: 1 No: 2
105	If yes (4), antenatal card reviewed?	Yes: 1 No: 2
106	Fetal heart listened to?	Yes: 1 No: 2
107	Vaginal examination (VE) performed? When?.....	Yes: 1 No: 2
108	Cervical dilatation (write cm in box)	-----cm
109	Woman asked if want to pass urine before VE?	Yes: 1 No: 2
110	Who performed the vaginal examination?	Doctor: 1

		Midwife: 2 Nurse: 3 Student: 4 Auxiliary Nurse: 5
111	Woman informed about the vaginal examination to be performed?	Yes: 1 No: 2
112	Health care provider washed hands with soap and water before VE?	Yes: 1 No: 2
113	Health care provider washed with soap and water after VE?	Yes: 1 No: 2
114	Vulva and perineal area washed or cleaned with swab before VE?	Yes: 1 No: 2
115	Gloves used in VE?	Yes: 1 No: 2
116	What type of gloves used in VE?	Surgical gloves: 1 Examination gloves: 2
117	Gloves discarded after use?	Yes: 1 No: 2
118	Same gloves used in another woman?	Yes: 1 No: 2
119	Gloves kept for sterilization?	Yes: 1 No: 2
120	Woman informed on the results of the examination orally?	Yes: 1 No: 2
121	Woman catheterized during VE?	Yes: 1 No: 2
122	Woman catheterized after VE?	Yes: 1 No: 2
123	Sterile catheter used for catheterization?	Yes: 1 No: 2
124	Intravenous infusion (IV) set up? Why?.....	Yes: 1 No: 2
125	If yes (23), what type of IV fluid/ or drugs?	50% glucose: 1

		5% glucose: 2 Normal saline: 3 Magnesium sulfate: 4
--	--	---

**SECTION D: MANAGEMENT OF FIRST STAGE OF LABOUR:**

Q101	Partograph available?	Yes: 1 No: 2
102	Partograph used on admission?	Yes: 1 No: 2
103	Partograph used throughout:	Yes: 1 No: 2
104	Fetal heart monitored?	Yes: 1 No: 2
105	If fetal heart checked on admission, is the number indicated?	Yes: 1 No: 2
106	If fetal heart beats indicated, write the number in the box.	.....bpm
107	How frequent is the fetal heart monitored?	On admission only: 1 Every 15 mins.: 2 Every 30 mins.: 3 Every 4 hours: 4
108	How frequent is VE performed?	On admission only: 1 Every 30 mins: 2 Every 1 hour: 3 Every 4 hours: 4
109	How many health workers performed the VE?	One person: 1 2 persons: 2 3persons: 3 4 persons: 4 More than 4 persons: 5
110	Membranes ruptured by health care provider?	Yes: 1 No: 2

111	Oral fluid offered by health care provider?	Yes: 1 No: 2
112	Oral fluid offered to woman on request?	Yes: 1 No: 2
113	Woman encouraged to move up and about by health care provider?	Yes: 1 No: 2
114	Oxytocin augmentation performed? Indicate reason for use?	Yes: 1 No: 2
115	Who ordered the augmentation?	Doctor: 1 Midwife: 2 Nurse: 3 Student: 4 Auxiliary Nurse: 5
116	Oxytocin given through IV infusion?	Yes: 1 No: 2
117	Units of oxytocin given through infusion bottle indicated?	Yes: 1 No: 2
118	If augmentation done, is fetal condition monitored per Guidelines?	Yes: 1 No: 2
119	If augmentation done, are contractions monitored per Guidelines?	Yes: 1 No: 2

#### **SECTION E: MANAGEMENT OF SECOND STAGE OF LABOUR:**

Q101	Delivery set assembled before delivery starts?	Yes: 1 No: 2
102	Delivery set sterile?	Yes: 1 No: 2
103	Delivery set complete?	Yes: 1 No: 2
104	Mother informed of stage of the labour?	Yes: 1 No: 2
105	Who conducted the delivery?	Doctor: 1

		Midwife: 2 Nurse: 3 Student: 4 Auxiliary nurse: 5 Other: 6 who?.....
106	Position during delivery?	Lithotomy: 1 Sitting: 2 Standing: 3
107	Health care provider asked woman about position she prefers for delivery?	Yes: 1 No: 2
108	Fundal pressure applied?	Yes: 1 No: 2
109	Bladder catheterization performed before delivery?	Yes: 1 No: 2
110	Bladder catheterization performed after delivery?	Yes: 1 No: 2
111	Episiotomy done?	Yes: 1 No: 2
112	If episiotomy done, instrument used for it?	Surgical blade: 1 Scissors: 2
113	Perineal tear occurred?	Yes: 1 No: 2
114	If episiotomy was done, was it done under local anaesthesia?	Yes: 1 No: 2
115	Episiotomy/ or tear, was it repaired under local anaesthesia?	Yes: 1 No: 2
<b>SECTION F: MANAGEMENT OF THIRD STAGE OF LABOUR:</b>		
Q101	Prophylactic use of oxytocics?	Yes:1 No: 2
102	Route used for the oxytocics?	IV: 1 IM: 2

103	Prophylactic use of ergometrine?	Yes: 1 No: 2
104	Route used for the ergometrine?	IV: 1 IM: 2
105	If prophylactic given, when was it given? (delivery of placenta)	Before: 1 After: 2
106	Controlled cord traction?	Yes: 1 No: 2
107	Manual exploration of the uterus after delivery?	Yes: 1 No: 2
108	Inspection of the placenta?	Yes: 1 No: 2
109	Estimation of blood loss? If yes, indicate in the box.	..... Yes: 1 No: 2
110	Woman informed about the sex of the baby?	Yes: 1 No: 2
111	Uterus examined for contraction?	Yes: 1 No: 2
112	Bladder examined?	Yes: 1 No: 2
113	Blood pressure measured after delivery? If yes, indicate amount in the box.	.....mmHg Yes: 1 No: 2
114	Pulse measured after delivery? If yes, indicate in the box.	.....bpm Yes: 1 No: 2
115	Temperature measured after delivery? If yes, indicate in the box.	..... Yes: 1 No: 2
116	Time spent in the labour ward for observation after delivery	Hrs /min

**SECTION G: IMMEDIATE CARE OF THE NEW BORN:**

Q101	What was the baby's cord tied with?	Sterile clamp: 1 Unsterile clamp: 2 Sterile thread: 3 Unsterile thread: 4
102	Baby dried with warm towels or clothes?	Yes: 1 No: 2
103	Baby wrapped in dry towels or clothes?	Yes: 1 No: 2
104	Baby dried and wrapped with dried cloth?	Yes: 1 No: 2
105	Baby placed on mother's abdomen or in her arms immediately?	Yes: 1 No: 2
106	Apgar score checked at one minute? If yes, indicate in the box.	...../...../ Yes: 1 No: 2
107	Apgar score checked at 5 minutes? If yes, indicate in the box.	...../...../ Yes: 1 No: 2
108*	Resuscitation of the newborn performed? If applicable.	Yes: 1 No: 2
109*	If resuscitation performed, by who?	Doctor: 1 Midwife: 2 Nurse: 3 Student: 4 Aux. nurse: 5
111	If suction was used, was the tube sterile?	Yes: 1 No: 2
112	Antibiotic eye ointment applied in both eyes?	Yes: 1 No: 2
113	Was baby weighed? If weighed, indicate in the box.	.....Kg Yes: 1 No: 2
114	Was baby examined for any abnormality?	Yes: 1

		No: 2
115	If baby was bathed, who bathed the baby?	Midwife: 1 Nurse: 2 Student: 3 Aux. nurse: 4 Orderly: 5 TBA: 6 Relative: 7
116	When was baby bathed?	Soon after birth: 1 After 30 minutes: 2 After 1 hour: 3 After 2 hours: 4 After 6 hours: 5 After 8 hours: 6
117	What was the baby bathed with?	Soft sponge: 1 Perineal pad: 2 Piece of cloth: 3



## **ANNEX 2.4 MATERNITY OUTPUT INDICATORS FOR 2010: SERVICE**

### **DATA:**

#### **COLLECTION GUIDE: Tool 4**

- ❖ Collect data by month (from January 2010 to December 2010)
  - Number of deliveries
  - Number of Caesarean sections
  - Number of Instrumental deliveries
  - Number of Live births
  - Number of Stillbirths (fresh stillbirths, macerated stillbirths)
  - Number of Maternal deaths
  - Number of labour referrals ‘out’ by cause
  - Number of labour referrals ‘in’ by cause

## **ANNEX 2.5 HEALTH CARE PERSONNEL INTERVIEW GUIDE: Tool 5**

Cadre of health worker.....Date conducted:.....

1. What do you use as a guide if any, in your management of labour?
2. (If guide available and used). How important is this guideline in your practice?
3. When a woman comes with normal labour, what are some of the things that you will encourage her to do?

Probe: (empty the bladder; bathing and cleaning; movement during labour and its advantages; labour position; oral fluids; IV fluids).

4. What are the challenges that health care personnel are faced with in carrying out their duties in this labour ward?

Probe: (workload; staffing; space; equipment; medicines).

5. What is your perception of availability or stock-out of some key essential supplies or medicines for labour care?
6. What will you recommend for better services for women coming to deliver in this facility and why?

Probe: (labour companion; supervision; training; guidelines).

## **ANNEX 2.6 MOTHER'S INTERVIEW GUIDE (EXIT INTERVIEW):**

Date.....**Tool 6**

Age:                      Parity:                      Education level:                      (find a private place)

### **General Reception and Expectation during admission:**

1. You have recently delivered in this facility; can you tell me how you were received when you immediately arrived?
2. You have recently delivered in this facility; can you tell me what you were expecting from health workers when you arrived? Explain why these are important?

### **Examination on Admission:**

3. Explain to me what happened when the health workers were examining you when you arrived in the labour ward?

### **Management during Labor and Delivery:**

4. Explain to me what was good in delivering in this facility?
5. What do you think can be improved in this facility?

## ANNEX 2.7 POST-PARTUM MOTHERS' FOCUS GROUP DISCUSSION

**GUIDE:** Date..... **Tool 7**

Characteristics of participants:

### **General Reception and Expectation when seeking health care:**

1. Explain how you feel any time you have contact with health care providers in Soma Major Health Centre.

Probe: greetings; woman asked reasons for coming; offered a place to sit; put on the examination bed; left standing or sitting on the floor; nurses and midwives reception of woman and their infants: friendliness, good interpersonal communication, readiness to share information; cost: informal and informal).

2. How will you say about the services given here: antenatal, post-natal care; labor and delivery care; laboratory services; availability of essential prescribed medicines at the pharmacy; etc.).

Probe: greetings; woman asked reasons for coming; offered a place to sit; put on an examination bed; left standing or sitting on the floor; friendliness to women, showing concern; gives clear information and health advice; cherishes informed decision-making).

### **Examination on Admission:**

3. You may have once been admitted here for a service, or one of your relatives or friends may have been admitted here for delivery or otherwise, what can you share with us about how health care providers respond to women's need, as you see it.

Probe: privacy; consent; vital signs checked; fetal heart checked; feedback given on findings; friendliness; good communication between women and health workers; clear information sharing).

**Management during Labor and Delivery:**

4. You may have once been admitted here for labor and delivery, or one of your relatives or friends may have been admitted here for delivery or otherwise, what can you share with us about how health care providers care for women, as you see it.

Probe: food and fluids; labour position; privacy; frequency of vaginal examination; communication between women and health workers).

5. What are the things you think people including you like or dislike delivering in this labor ward, if any?

Probe: labor position; frequency of vaginal examination; communication between women and health workers).

## **ANNEX 3.1 INFORMATION SHEET FOR HEALTH CARE PROVIDERS:**

**Version 1, 7<sup>th</sup> July 2001**

### **Title: The quality of intra-partum care in a rural major health centre**

The main objective of this study is to assess the quality of care given to women in childbirth. The study will include observation of labour care and have an audience with the health care provider in the form of an in-depth interview to look at salient areas linked to intra-partum care quality. The study period is scheduled from August 2011 to December 2011.

The results of the study may help the Ministry of Health better focus on the strengthening of the regional health care delivery system, particularly in major health centres where there are no projects geared towards the improvement of overall maternity care services. Increased budgetary allocation for overall maternity care services at national level may come out as a result.

It may also encourage potential donors and international non-governmental organizations interested in maternity care as a contribution towards millennium development goal 4 (reduce child mortality) and 5 (improve maternal health) to come in.

It will also help care providers and experts better understand the needs of women and health workers towards better improvement of care. It will also help to add to the body of knowledge on both maternal and neonatal health.

This will also help health care providers identify their strengths and weaknesses as regard to evidence-based direct intra-partum care for the better. Understanding how women perceive health workers' attitudes and sharing of information may also be an advantage for them.

Participating in this study means you are contributing towards the possible improvement of health of women and children.

The information about what we observe or you provide during the study will strictly be kept confidential, and will be under lock and key. The data will not be accessible to those not directly linked with the research.

The research participant has the right to refuse to participate, or withdraw at any stage of your participation. The Ethics committee has approved the study proposal. In addition, the participant is free to ask questions with regard to the study.

Thank you for your understanding.

Contact: **Ngally Aboubacarr Sambou**: cell: 984 77 43

Email: [naalepi@yahoo.com](mailto:naalepi@yahoo.com); [n.a.sambou@studmed.uio.no](mailto:n.a.sambou@studmed.uio.no)

## **ANNEX 3.2 INFORMATION SHEET FOR WOMEN PARTICIPANTS:**

**Version 1, 7<sup>th</sup> July 2001**

**Title: The quality of intra-partum care in a rural major health centre**

The main objective of this study is to assess the quality of care given to women in childbirth.

The researcher(s) as part of the study will observe the care given to the woman by the health care provider during the process of her labour.

The study period is scheduled from August 2011 to December 2011.

The results of the study may help the Ministry of Health better improve health care services for women and children.

It may also encourage potential donors and international non-governmental organizations interested in maternity care as a contribution towards the health of women and children.

It will also help care providers and experts better understand the needs of women and health workers towards better improvement of care.

Participating in this study means you are contributing towards the possible improvement of health of women and children.

The information about what we observe during the study will strictly be kept confidential, and will be under lock and key. The data will not be accessible to those not directly linked with the research. The data collected from participants will be anonymous.

The woman participant has the right to refuse to participate, or withdraw at any stage of your participation. Refusal or withdrawal will not in any way affect the care the woman participant have in this facility.

The Ethics committee has approved the study proposal.

In addition, the participant is free to ask questions with regard to the study.

Thank you for your understanding.

Contact: **Ngally Aboubacarr Sambou**: cell: 984 77 43

Email: [naalepi@yahoo.com](mailto:naalepi@yahoo.com); n.a.sambou@studmed.uio.no

### ANNEX3.3 Consent Form for health care providers

#### **Title of Research Project: The quality of intra-partum care in a rural major health centre in The Gambia**

I have read and understood the information sheet.

I understand that my participation means I am contributing towards the possible improvement of health of women and children. I also understand that the study will help health care providers better understand the health care needs of women and care providers towards better improvement of care.

I understand that the information regarding me that is collected in the course of this study will remain confidential.

I understand that I am free to take part in the study or refuse, and that I can withdraw from the study at any time, and without giving any reason. Deciding not to take part or to withdraw from the study will not affect the care that I am normally entitled to.

I have had a chance to ask questions and have them answered.

This form has been read by / I have read the above to \_\_\_\_\_  
(name of care provider)

in a language that he/she understands. I believe that he/she has understood what I explained and that he/she has freely agreed to take part in the study.

Signature of field worker: \_\_\_\_\_

Name of field worker: \_\_\_\_\_

Date:                   |\_|\_|/|\_|\_|/|\_|\_|\_|\_|



### **ANNEX 3.4 Consent Form for women participants (oral consent)**

#### **Title of Research Project: The quality of intra-partum care in a rural major health centre in The Gambia**

The information sheet has been read to me and I understand it.

I understand that participation in the study means that I am contributing towards the possible improvement of health of women and children. I also understand that participation has the possibility to help health workers better understand the health care needs of women.

I understand that the information regarding me that is collected in the course of this study will remain confidential.

I understand that I am free to take part in the study or refuse, and that I can withdraw from the study at any time, and without giving any reason. Deciding not to take part or to withdraw from the study will not affect the care that I am normally entitled to.

Signature of field worker: \_\_\_\_\_

Name of field worker: \_\_\_\_\_

Date:                   |\_|\_|/|\_|\_|/|\_|\_|\_|\_|

## ANNEX 4: Ethics Approval Letter

The Gambia Government / MRC Unit, The Gambia Joint

### **ETHICS COMMITTEE**

C/o MRC Unit: The Gambia, Fajara  
P. O. Box 273, Banjul  
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Fax: +220 – 4495919 or 4496 513  
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30 September 2011

Mr Ngally Aboubacarr Sambou  
Department of General Practice and Community Medicine  
University of Oslo  
P.O. Box 1130, Blindern  
Norway

Dear Mr Sambou

#### **SCC 1248v2, Quality of Intra-partum care in a rural Major Health Centre in The Gambia**

Thank you for submitting your revised information sheets and consent forms as requested by the Gambia Government/MRC Joint Ethics Committee at its meeting held on 24 June 2011.

These are satisfactory and follow our approved format. I am happy to record our committee's full approval of this study.

With best wishes

Yours sincerely

  
Mr Malcolm Clarke  
Chairman, Gambia Government/MRC Joint Ethics Committee

#### **Additional documents submitted for review:-**

- Consent Form for women participants (oral consent), Version 1.0 – 26 September 2011
- Consent Form for health care providers, Version 2.0 – 26 September 2011
- Information Sheet for health care providers, Version 1.0 – 7 July 2011
- Information Sheet for women participants version 2.0 – 7 July 2011
- Guide on Information, version 1.0 – 27 May 2011
- Proposal – University of Oslo – December 2010
- Ethical Considerations

#### **The Gambia Government / MRC Laboratories Joint Ethics Committee:**

*Mr Malcolm Clarke, Chairman*  
*Mrs Kathy Hill, Secretary*  
*Ms Naffie Jobe, 2<sup>nd</sup> Secretary*  
*Professor Ousman Nyan, Scientific Advisor*  
*Mr Dawda Jagne*  
*Mrs Bertha M'Boge*  
*Mr Modou Phall*

*Professor Tamani Corrah*  
*Dr Stephen Howie*  
*Dr Mamady Cham*  
*Dr Lamin Sidibeh*  
*Dr Kalifa Bojang*  
*Mr Malamin Sonko*