

**INTRAPARTUM PRACTICES OF MIDWIVES IN MOI TEACHING AND
REFERRAL HOSPITAL LABOUR WARD DURING NORMAL
CHILDBIRTH**

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(BSC. NURSING)

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DECLARATION

Declaration by Candidate

I hereby declare that this thesis is my original work done in partial fulfillment of Master of Science in Nursing (Maternal and Neonatal Health) degree program.

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DEDICATION

I dedicate this work to mothers who have and those who are yet to give birth, and the midwives who assist them in the process.

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I would like to acknowledge Moi University, School of Medicine for granting me the opportunity to learn and come up with this study. I also appreciate the effort of my supervisors for working with me tirelessly. I appreciate the efforts of my external lecturers; Dr. Marriane Reid and Dr. Rennette Myburg in developing this research.

Lastly, would also like to thank my family for their support while developing the proposal and conducting this study.

ABSTRACT
INTRAPARTUM PRACTICES OF MIDWIVES IN MOI TEACHING AND
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CHILDBIRTH

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Introduction: Normal childbirth is regarded as a natural or physiological process. Thus, the care here-in should be effective and supportive of this process. However, normal childbirth is often managed like an illness rather than a normal life event. The situation among midwives of MTRH may not be different from elsewhere in Africa where normal birth care is not evidence based and is often intervention intensive.

Aim of the Study: The study was aimed at identifying and describing the normal childbirth care practices of midwives in MTRH labour ward.

Specific Objectives: This study observed the normal childbirth care practices of midwives in MTRH and evaluated them against the Kenya National Guidelines, WHO's and Lamaze recommendations for care during normal childbirth. The study also described the constraints and opportunities of the midwives in implementing the normal childbirth care practices.

Methods: This was a descriptive survey, which utilized a structured observation checklist and key informant interviews to collect data. All the midwives in the MTRH labour ward were observed attending to one mother undergoing normal birth each. Then, two key informants; the midwife in-charge of labour ward and the midwife in-charge of the reproductive health unit, were interviewed to elicit the opportunities and constraints in implementing the normal childbirth care practices.

Findings: Out of the seven positive practice recommendations above, only two were performed in more than 50% of the cases- freedom of movement during first stage of labour (100%) and initiation of breastfeeding within 30 minutes after birth (67.9%). The commonest negative interventions were intravenous infusion (60.7%) in first stage and restriction of oral intake (77.4%) in second stage. The main constraints implementing the evidence based practices are lack of information and lack of exposure of the midwives to some of the practices. The main opportunity in implementing the practice guidelines is regular training for midwives.

Conclusion: The midwives of MTRH are lacking in a number of aspects regarding care during normal childbirth.

Recommendations: The lacking practices like adequate ambulation, birth in non-supine positions and spontaneous pushing need to be encouraged among the midwives. Such practices can be included in the protocols.

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LIST OF ABBREVIATIONS

ARM- Artificial Rupture of Membranes

CIMS- The Coalition for Improving Maternity Services

CTG- Cardiotocograph

ICM- International Confederation of Midwives

IREC- Institutional Research and Ethics Committee

MFCI- Mother Friendly Childbirth Initiative

MOH- Ministry of Health

MTRH- Moi Teaching and Referral Hospital

NCK- Nursing Council of Kenya

RCM- Royal College of Midwives

RCT- Randomized Controlled Trials

RHL- Reproductive Health Library

SSC- Skin to Skin Contact

SPSS- Statistical Package for Social Sciences

SR- Systematic Review

TBA- Traditional Birth Attendant

WHO- World Health Organization

CHAPTER ONE

1.0 Introduction and Background

Childbirth was viewed as a normal process before the 20th century. Then, birth most often took place at home under the care of midwives (Zwelling, 2008:85). However, changes in the care of normal births are traced to the germ theory that matured in the late 19th century and the resultant effects of the antiseptic technique that were seen from the year 1910 (Gibson, 2008a:34-38). According to Gibson, the principles of antiseptic technique infiltrated into maternity care for healthy women. Hence, birth was moving from homes to hospitals.

In the hospitals, childbirth was viewed as an illness. The view of childbirth as an illness was based on the risk approach that was being used in its management (World Health Organisation, 1996:3). With the risk approach, 'childbirth can only be declared normal in retrospect'. This led obstetricians in many countries to conclude that care during normal childbirth should be similar to the care in complicated births (WHO, 1996:2). Therefore, based on this approach, all births are to be managed like complicated births.

Evidence indicates that complicated births are rare. According to the WHO (1996:5), 70% to 80% of all pregnant women may be considered as low-risk at the start of labour. A study in Kenya on the degree of risk culminating childbirth indicated that most of the labours were uncomplicated (Mati, Aggarwal, Sanghvi, Lucas & Corkhill, 1983). This implies that, despite their medical management in hospitals, most of the births are normal.

Moving childbirth from homes to hospitals and the risk approach in its management affected the nature of childbirth care. The care was predominated with medical interventions which also led to the separation of the mothers from their babies and other family members (Zwelling, 2008:85; Gibson, 2008b:8). It also culminated into successful appropriation and medicalisation of childbirth by medicine, often with the power to subordinate midwifery (Benoit, Wrede, Bourrgeault, Sandall, De Vries & van Teijlingen, 2005:724; Cahill, 2001:334; WHO, 1999:9). Stated differently, the care given to mothers during normal childbirth was with technological medical interventions as led by doctors and not by midwives.

However, the changed nature of normal childbirth care was recognized and measures to revert it initiated. In 1997, in response to the highly technological normal childbirth care, the WHO published a classification of evidence based practices for care during normal birth (WHO, 1999). The WHO guidelines appreciate the independent professional midwife as the most appropriate normal childbirth care provider (WHO, 1999:6-7). These guidelines correspond with the Midwifery Model of Care as proposed by International Confederation of Midwives (ICM). This model is based on the belief that birth is a normal physiological process and requires that midwives promote and advocate for non-intervention in normal childbirth (International Confederation of Midwives, 2002:2). Thus, the WHO guidelines coupled with the Midwifery Model of Care are meant to guide childbirth care as a normal life process with minimal technological interventions.

To regard childbirth as a normal process, there are practice guidelines to be ensured. The WHO identifies four care practices that promote, protect, and support normal

birth namely: Allowing labour to begin on its own; companionship during labor; spontaneous pushing in non-supine positions and putting the mother and baby together after birth (Chalmers & Porter, 2001:80-81; WHO, 1999). Lamaze International, an advocacy organization, has identified two more practice categories (Romano & Lothian, 2008:95-96) based on the WHO classification: Freedom of movement during labour and avoidance of routine interventions (WHO, 1999). Together, the above practices have been regarded by Lamaze as the six categories of practices for normal childbirth. According to Romano & Lothian (2008:96), five of the categories of practices promote the normal physiological process of labour while the sixth- no routine interventions, avoids unnecessary disruption of the normal physiological process. However, this study will exclude the first category of practices which requires that normal labour begins on its own because it is a requirement for inclusion.

Conversely, childbirth care practices in many countries in the world are not respectful of the normality of the process. Surveys done in the Arab World (Egypt, Lebanon, West Bank and Syria) (Khalil et al. 2005) and Africa (Cameroon, Zambia, Tanzania, Côte d'Ivoire and Egypt) (Thérèse, Odile, Valerie, Patrice, Simon, & Carine, 2007; Tita, Selwyn, Waller, Kapadia & Dongmo, 2005; Khalil et al. 2005; Maimbolwa, 2004; Lugina, Mlay & Smith. 2004) have found that facility practices for normal childbirth were largely not in accordance with the WHO evidence based recommendations.

In Kenya, the National Guidelines for Normal Childbirth adopted the above five categories of evidence based practices. The Reproductive Health Instructional

Manual for Service Providers (Ministry of Health, 2006a: 2-47) and Essential Obstetric Care Manual for Health Service Providers (Ministry of Health, 2006b:44-47) hold that the care of mothers during normal childbirth should include: Ambulation during labour; support companions; adoption of position of choice during childbirth; recognition of the expulsive phase of second stage and early skin to skin contact between the mother and her baby. These guidelines also discourage routine practices like: starving, pubic shaving, enemas and routine episiotomy (MOH, 2006b:44-46).

Despite these normal childbirth practice recommendations, little is known about the current practices in Kenyan health care facilities. Nonetheless, no published evaluation of the normal childbirth care practices in the Kenyan state facilities was found. Aga Khan Hospital in Nairobi has adopted lay birth companionship and choice of birth positions with input from a Lamaze certified professional (Carroll, 2004:30). Thus, it would be safe to say that there are islands of normal childbirth care practices in Kenya. Therefore, the situation in Moi Teaching and Referral Hospital may be similar to what has been found in facilities in other countries.

1.2 Research Problem

Most (70-80%) of the births that take place in hospitals are uncomplicated (WHO, 1996; Mati et al. 1883). The care of these births is mainly performed by the midwives as recommended by WHO (WHO, 1999: 7). However, there are still high levels of medical interventions during normal childbirth.

Since there are high levels of medical interventions during normal childbirth, it is a priority of the WHO, Lamaze and the ICM that the care of mother's undergoing normal childbirth be promotive, protective and supportive of this physiological process. Hence, WHO and Lamaze has prescribed guidelines that contain categories of practises that, if implemented, promote, protect and support the normality of childbirth. These practises have been replicated by the Kenya national guidelines (MOH, 2004:45; MOH, 2006b:44-46). The practises categorized have been proven through reliable evidence (Enkin et al. 2000). Thus, the practises are either useful or unbeneficial or detrimental to the mothers and/or their babies.

Although many mothers experience normal childbirth, the care they receive is often irrespective of the physiological process. However, there is no published evaluation of the practises of midwives during normal childbirth in Kenya, evidence from other countries show that this care is mainly not supportive of the physiological process of childbirth. Since there is no description of the current normal childbirth care practises of Kenyan midwives, there is need to conduct such a study.

1.3 Aim and Objectives of the study

The aim of the study was to identify and describe the normal childbirth care practices of midwives in MTRH labour ward.

The objectives of the study were to:

- 1.3.1. Observe the normal childbirth care practises of midwives in MTRH labour ward

1.3.2. Compare the normal childbirth care practices of the midwives in MTRH labour wards with a checklist derived from three guidelines.

1.3.3. Describe the constraints and opportunities of the midwives in implementing the normal childbirth care practices

1.5 Conceptual and Operational Definitions

Normal Childbirth- Is technically defined as childbirth 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 (the back of the foetal head) position between 37 and 42 completed weeks of pregnancy. After birth mother and infant are in good condition (WHO, 1999:3).

Thus the mothers who qualified for this study had to be within the stipulated gestational age, started labouring spontaneously and were considered low-risk from pregnancy and throughout labour. However, all mothers who were admitted with a cephalic presentation were assumed to have a vertex presentation.

Stages of Labour

First Stage- This stage of labour begins with the onset of regular uterine contractions and ends when the cervix is fully dilated (Woods, 2005). Mothers who were regarded to be in first stage of labour were those with a cervical dilatation of between 4cm and full dilatation of the cervix, and admitted in the labour ward.

Second Stage- Second stage of labour starts when the cervix is fully dilated and ends when the infant is completely delivered (Woods, 2005). Operationally, mothers who

were confirmed to be fully dilated were regarded to be in second stage. Similarly, if a mother had evident signs of full dilatation like bulging of the perineum with the foetal head will also be considered to be in second stage.

Immediate Care of the Newborn- The immediate care of the newborn would encompass all the actions targeting the newborn once it has been born. These are the practices that could even fall within fourth stage of labour which is one hour after delivery of the placenta. However, this study regarded the following two practices as relevant in the immediate care of the newborn: Early skin-skin-contact between the mother and her newborn and early initiation of breastfeeding.

Evidence Based Best Practices- These are practice recommendations that are grounded in evidence generated from Systematic Reviews (SR) of Randomized Controlled Trials (RCT) (Oxford Centre for Evidence-based Medicine, 2001). Hence, the practices described are as supported by evidence from systematic reviews of randomized controlled clinical trials.

Midwife- This is a person who, having been regularly admitted to a midwifery education programme, duly recognized in the country 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 practise midwifery (ICM, 2005). This definition applies to the midwives employed in MTRH labour ward. This is because registration and licensure by the Nursing Council of Kenya (NCK) is a requirement for employment. Within their scope of practice, the

midwives are entitled to the care of the mothers before, during and after pregnancy, and the care of the neonates within the first six weeks of life (ICM, 2005)

1.6 Significance of the study

This study aims at determining the current practices of midwives working in MTRH labour wards during normal childbirth care. By ascertaining whether the current childbirth care practices of the midwives are evidence based best practices the midwives will be able to discern their level of care.

The results of this study will also be used by the hospital administration as an evaluation of the normal childbirth care practices of its midwives. This should be able to guide the hospital administration on the need and measures to implement best practices based on evidence and policy changes. Data from this study will also inform decision making regarding normal childbirth practices in the labour ward.

The study will also make practice recommendations that will help improve evidence based care during normal childbirth. If implemented, the recommendations are meant to offer safe, acceptable and affordable normal childbirth care services thus improving the quality of care.

A copy of this research report will be availed to the MTRH administration. A meeting with the midwives will be convened to brief them of the findings and recommendations. The findings of this study will be published in order to give insight to midwives into the recommendations for care during normal childbirth.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

Midwifery is a health care profession in which providers offer care to childbearing women during their pregnancy, labour and birth, and during the postpartum period. They also care for the newborn through to six weeks of age, including assisting the mother with breastfeeding. A practitioner of midwifery is known as a midwife, a term used in reference to both women and men, although the majority of midwives are female.

The midwifery profession is antique. The midwife is mentioned in the Book of Genesis, 35:17: where a midwife attended to Rachel as she gave birth to her twins; Benjamin and Tamar. The bible states; "And when she (Rachel) was in her hard labour, the midwife said to her, 'Fear not, for now you will have another son.'" The book of Exodus, 1:20 states, "Therefore God dealt well with the midwives: and the people multiplied, and waxed very mighty."

Contemporary midwives are autonomous practitioners who are specialists in low-risk pregnancy, childbirth, and postpartum. They generally strive to help women to have a healthy pregnancy and natural birth experience. Midwives are trained to recognize and deal with deviations from the norm (ICM, 2003). Obstetricians, in contrast, are specialists in illness related to childbearing and in surgery. The two professions can be complementary, but often are at odds because obstetricians are taught to "actively manage" labour, while midwives are taught not to intervene unless necessary.

A majority of labouring mothers experience natural or normal childbirth (WHO, 1999). Thus, regardless of the provider, care during normal childbirth should be protective and supportive of this physiological process. However, the contemporary normal childbirth care is often intervention intensive. Hence normal childbirth is managed as an illness full of medical interventions, contrary to the WHO, Lamaze and the Kenyan National Reproductive Health recommendations.

This chapter gives an exposé of how the care during normal childbirth has transformed over the ages in the history of midwifery care. It also highlights current differences in normal childbirth care across economies and how midwifery care stands out. The authors also discuss the concept of Evidence Based Practises and how the WHO, Lamaze and the ICM interplay in the prescription and promotion of the best practise guidelines for normal childbirth care. This chapter will then describe in detail the evidence based best practises applicable alongside the labour process i.e. first stage, second stage and the immediate care of the newborn. Lastly, some of the general constraints and opportunities in implementing the practices will be presented.

2.1 Midwifery Care for Normal Childbirth

Midwifery care has been tested through reliable research. A Randomized Controlled Trial by Turnbull et al. (1996:213) concluded that midwives managed care for healthy women, integrated within existing services, is clinically effective and enhances women's satisfaction with maternity care. Midwifery care for normal births has also been prescribed by WHO. The WHO appreciated the professional midwife as the most appropriate and cost effective type of health care provider to be assigned to the

care of mothers during normal childbirth (WHO, 1999:5-6). These recommendations demonstrate the indications for midwifery care for all normal births.

However, normal childbirth in many health care settings is not midwife-led. In many developed and developing countries midwives are either absent or are present only in large hospitals where they may end up serving as assistants to the obstetricians (WHO, 1999:7). This means that the midwives may end up lacking autonomy by serving as subordinates to the obstetricians.

2.2 Normal Childbirth Care across Economies

With obstetricians overall in the care of normal births in many settings, the care herein is would often be technological. Actually, as it will be discussed below, the motivation behind the WHO's recommendations for care during normal birth is that industrialised countries manage normal birth at unnecessarily high technological interventions (WHO, 1999). Then, the fear was that the situation was being inherited by countries building up antenatal and intrapartum care (Sandin-Bojo et al. 2004). Unfortunately, these guidelines may not have succeeded.

Studies have been done to evaluate the care during normal childbirth in developed countries. Two of these studies have been sampled. In New Zealand and England, irrespective of the high normal childbirth proportions (70% and 72% respectively for the year 2002) care herein is marred with interventions like epidural analgesia and episiotomies (Beech & Phipps, 2004:62). Similarly, based on a national survey done in America, most mothers had electronic foetal monitoring (94%), intravenous drips

(83%) and epidural analgesia (76%) as the norm (Declercq et al. 2006:3). These studies thus show that the care is technology intensive.

The trend of technology intensive normal childbirth care in developed countries is already being reflected in the developing countries. A study done in Egypt, Lebanon, West Bank and Syria found that facility practices for normal labour were largely not in accordance with the WHO evidence based recommendations (Khalil et al. 2005). In a similar study in China, more than 70% of the mothers experienced pubic shaving, episiotomy and birth in supine positions. In Africa, studies have been done in Cameroon (Tita et al, 2005) Zambia (Maimbolwa, 2004), Tanzania (Lugina et al. 2004), Côte d'Ivoire (Thérèse et al. 2007) and Egypt (Khalil et al. 2005) to assess the routine practices during normal childbirth care. The most common practices found were routine supine position during birth with restricted mobility during labour (Lugina et al. 2004; Khalil et al. 2005) and low use of social support (Tita et al, 2005: 898, Maimbolwa, 2004:15;Thérèse et al. 2007:25) among others.

If the above trend of practices that has infiltrated the care of normal birth is not curtailed, birthing will no longer be normal. Hence the normal childbirth care practice guidelines that are based on reliable evidence. The concept of evidence based care in maternity and the need for change are as discussed below.

2.3 Evidence Based Care in Maternity and Need for Change

This section describes the basic principles for determining what constitutes the best available evidence. It also describes how the WHO and Lamaze generated the categories of practices that promote, protect and support normal childbirth. This

section will then state the role of the International Confederation of Midwives in partnership and empowerment towards changing care during normal childbirth worldwide. Lastly a presentation of the factors affecting the practice of midwives and the role of the midwife in changing practice will be given.

2.3.1 Evidence Based Care Concept

Rycroft-Malone et al. (2004), while questioning what really counts as evidence in evidence based practice, appreciate that evidence is derived from a variety of sources that has been subjected to testing and found to be 'credible'. Thus, according to Sakala & Corry (2008:21-22), the following are the basic principles for (testing and) determining what constitutes best available evidence.

Questions common assumptions: Care based on the opinion of experts or the general public or on tradition is unreliable. These views and patterns of care have been shaped by many factors and often do not reflect the best current research. They may lead to inadequate care, poor outcomes and wasted resources.

Many studies of interventions are unreliable guides for decision making: This then requires careful evaluation of the quality of research. This requires many well conducted researches to draw the best and most definitive answer, and what, if anything, a new study will add.

Look for the 'Gold Standard': When available, well designed and well conducted systematic reviews are able to limit investigator bias and error that can easily distort

results of single studies. If systematic reviews are not available, well designed and well conducted studies with randomized controlled trial designs can be utilized.

Make informed decisions that consider evidence about safety and effectiveness and the values and circumstances of individual women: Consider evidence as well as the values, preferences and individual circumstances of childbearing women and the available options within specific settings.

Thus, evidence generated from Systematic Reviews (SR) of Randomized Controlled Trials (RCT) is regarded as superior while expert opinions as a source of evidence is last (Oxford Centre for Evidence-based Medicine, 2001).

The practice guidelines are discussed below based on reliable evidence.

2.3.2 WHO and Lamaze Recommendations of Practices

As it has been realised above, the care during normal childbirth eventually became intervention intensive. In 1985, the WHO expressed concerns about the rising intervention rates in childbirth (WHO, 1985 quoted in Sakala & Corry, 2008:1; Sandin-Bojo et al. 2004). Latter in 1997, in an attempt to establish some norms of good practice for the conduct of non-complicated labour and delivery, the WHO developed evidence based guidelines for normal birth care (WHO, 1999). These guidelines were to establish norms of good practices for the care of normal births.

Following the establishment of the guidelines, the WHO developed a simple tool, the Bologna score, for evaluating whether childbirth is managed as a normal life event as

opposed to a medical event (WHO, 2001:13; Chalmers & Porter, 2001:81). This tool contains five indices: presence of a companion, use of partograph, absence of augmentation (labour begins normally), use of non-supine position for birth and skin to skin contact (SSC) of the mother and the baby for at least 30 minutes within the first hour of birth. To be able to manage birth as a normal life event, facilities had to exhibit the above indices of the Bologna score.

The practices that promote normal childbirth have been extrapolated from the WHO guidelines for care during normal birth (WHO, 1999). Then Lamaze Institute of Normal Birth, basing on the WHO recommendations, added two more categories of practices while leaving out the partograph. These are freedom of movement during labour and avoidance of routine interventions. Five of these categories are practices that promote physiological process of labour while the sixth care practice- no routine intervention, avoids unnecessary disruption of the normal childbirth process (Romano & Lothian, 2008:96). Together, the six practices make up the practices that promote, protect and support normal childbirth. The care of childbirth as a normal life event is also promoted and supported by the International Confederation of Midwives (ICM) as elaborated below.

2.3.3 ICM Model of Care

Buttressing professional midwifery practise is the 'midwifery model of care' as prescribed by the International Confederation of Midwives (ICM). It is based on the premise that pregnancy and birth are normal life events. This woman-centred model of care prescribes a holistic care of mothers to include continuous attendance during

childbirth as well as minimizing technological interventions during normal birth (ICM, 2002:2).

2.3.4 Factors Influencing Practice

Some of the factors influencing the practice of midwives have been described below. First, managing clients during normal birth, midwives have found themselves in a quagmire between promoting best practises and ensuring safety and implementing the technology intensive risk approach. Thus, according to Zwelling (2008:88) the midwives, like other care providers employ defensive practise. According to this author, the midwives may believe that if they can obtain some control of the labour and birth process, they can control negative outcomes as well. Resultantly, in the name of safety, the care of mothers is with many interventions.

Secondly, some of the practises have also been attributed to the scope of the educational programs for midwifery and obstetric care. Sometime there could be very little time allocated for the maternal-newborn nursing course (Maimbolwa, 2004). In other settings, within the time allocated for maternal and newborn health, the focus has shifted from that of normal birth and nursing care to support it to a high-risk focus with all the accompanying high-tech interventions (Kitzinger, 2004:69).

Lastly, the model of care adopted by individual health care facilities will also determine the practises of midwives and other care providers. If the hospital has adopted a high tech birthing model, then routine interventions are very likely. According to Downe (2006:353), the ideal would be a low-tech model and high-touch

model in order to minimize medical interventions and maximize support in childbirth to promote the normality of the process.

2.3.5 The role of the Midwife in Changing Practice

The midwives have an important role to play in ensuring that midwifery practice is promotive, protective and supportive of the normal childbirth process. The following roles have been described in detail below; increase knowledge, embrace the midwifery model of care, advocacy, strengthen birth preparedness, increase labour support skills, welcome doulas and companions in the routine midwifery care, change the birth environment and establish multidisciplinary implementation committees (ICM, 2005).

Increase Knowledge

It is of importance that the midwives need to be aware of evidence-based practice related to midwifery care to promote normal birth for childbearing women (Albers, 2005, 2007). According to this author, the midwives should strive to read professional journals and attend conferences to learn about current recommended practices based on research. According to Romano & Lothian (2008:102), respecting change of practice will automatically challenge the midwives' long-held beliefs.

Embrace the Midwifery Model of Care

The midwives also need to embrace the philosophy of midwifery (ICM, 2005). This includes the belief that birthing is a normal physiological process with the occasional need for intervention, and a major event in the life of a woman. This belief should be manifested in practice of the midwives.

Advocacy

The midwives need to become vocal advocates for normal birth in the community (Kennedy & Shannon, 2004). According to these authors, midwives should share positive messages about childbirth with the young women in your life before they become pregnant. Midwives can also engage themselves in “social marketing” in their communities to counter the negative impressions of birthing given to women by the media (Boyd, 2006).

Strengthen Birth Preparedness

The midwives should work to ensure adequate antenatal client education and to develop creative ways to attract expectant women and their families, including the spouses, to attend.

Increase Labour Support Skills and Welcome Support Persons

The midwives should increase their labour support skills along with the technical skills. This would increase the hands-on interventions to assist women during labour. They can do this by attending labour support seminars, and reviewing available information on the same. (Hodnett et al., 2006; Perez, 2002; Simkin & Ancheta, 2005; Zwelling, Johnson, & Allen, 2006).

It will also be vital to encourage the introduction of doulas as part of the health care team for women during labour. This role could be played by the Traditional Birth Attendants (TBAs) who are being phased out of the health care system. Elsewhere, hospitals have even started a doula service to provide labour support to clients.

Change the Birth Environment

The midwives need to advocate for changes in the birth environment in hospitals. Ideal labour and delivery rooms should help families give birth in a home-like setting and help the event to feel more normal. However, the design of the rooms alone is not enough. The physical environment needs to be accompanied by implementing a family-centered model of care (Phillips, 2003).

Establish Implementation Committees

The midwives should facilitate the establishment of interdisciplinary committees to develop and implement standardized unit policies related to all aspects of clinical practice (e.g., alternative labour support modalities). These committees should have membership representation from obstetrics, anaesthesia, nursing and midwifery.

In summary, it is of importance to base care on reliable evidence. The normal childbirth care practice guidelines as proposed by WHO and then Lamaze are rooted on reliable evidence. These guidelines have been supported by the ICM. The midwives should strive to implement these practices in order to promote normal childbirth. The above is in a bid to re-shape the care of mothers undergoing normal birth. The next section will discuss the importance of each of the practices mentioned in the guidelines and the evidence behind them.

2.6 The Normal Childbirth Care Practises

The normal childbirth care practices that are discussed hereunder have been grouped into three levels of application with respect to the labour process: First stage of labour, second stage of labour and the immediate care of the newborn. All the

practices mentioned in the five categories: Freedom of movement throughout labour; continuous labour support; spontaneous pushing in upright or gravity-neutral positions; no separation of mother and baby at birth with unlimited opportunities for breastfeeding and no routine interventions will be discussed.

2.6.1 First Stage of Labour

This section covers those practises that are relevant from the time of admission of the mother in labour ward until realization of full dilatation of the cervix. These are, freedom of movement throughout labour, continuous labour support, and no routine interventions like pubic shaving, electronic foetal monitoring, intravenous infusion, artificial rupture of membranes, restriction of food and fluids and labour augmentation and uncontrolled administration of oxytocin.

2.6.1.1 Freedom of movement throughout labour

The mother-friendly childbirth initiative holds that all mothers walk, move about and assume the positions of their choice during labour and birth (Coalition for Improving Maternity Services- CIMS, 1996). According to a systematic review by Storton (2007:25S), freedom of movement in labour appears to facilitate the progress of labour and enhance childbirth satisfaction whereas restricting women's movement may have adverse effects. These findings are compounded by another systematic review on maternal position during the first stage of labour (Souza et al, 2006). This review found that encouraging women to adopt an upright position or to ambulate during the first stage of labour reduces its duration (average of 0.85hours) and use of analgesia besides increasing women-rated positive experience in labour.

There was also no evidence for harm found for freedom to ambulate, move about or change position during labour and birth when restriction is not required to correct a complication (Storton, 2007:25S).

Storton (2007:25S-26S) has regarded a variety of positions that may be helpful. These include standing, kneeling, squatting, use of a birthing chair or a birthing stool and hands and knees position.

2.6.1.2 Continuous Labour Support

The philosophical basis of midwifery care lies in the meaning of midwife- ‘with woman’. However, besides midwives, the support persons during childbirth would also include labour support professionals e.g. doula and social support persons and companions (CIMS, 1996). Among the birth companions at the mothers’ disposal include but not limited to: fathers, partners, children, family members and friends (social support). According to WHO (1999:12-13), these support persons should be people the mother trusts and feels comfortable with.

Common elements of one-to-one labour support as elaborated by Hodnett et al. (2006:2) include emotional support (continuous presence, reassurance, and praise), information about labour progress and advice regarding coping techniques, comfort measures (comforting touch, massage, warm baths/showers, promoting adequate fluid intake and output), and advocacy (helping the woman articulate her wishes to others).

Continuous presence of a labour companion has been found to offer important benefits to labouring women in comparison with usual care. This is according to a

systematic review by Hodnett et al. (2006) which found a reduced likelihood of pain medications, caesarean section, assisted delivery and dissatisfaction with the childbirth experience. Labour support also increases the likelihood of spontaneous vaginal birth (Simkin & O’Harra. 2002). No adverse effects were identified with the continual presence of a labour companion (Hodnett et al. 2006; Simkin & O’Harra. 2002)

Similarly, the importance of empathic professional and/or social support lies in the nurturing nature of their care during labour, birth and immediately after. (Meyer et al. 2001:57) These authors articulate that a mother who is nurtured through labour, birth, and the early postpartum period is able to nurture and care for her infant, ensuring successful breast-feeding.

Supportively, a book is available to help a partner, friend, or relative who might wish to take on the role of a childbirth companion (Simkin, 2008).

2.6.1.3 No Routine Interventions

The routine interventions that are relevant during first stage of labour are routine intravenous infusion, artificial rupture of membranes, labour augmentation and uncontrolled administration of oxytocin, and restriction of oral foods and fluids. These practices are discussed below.

Pubic Shaving

Routine pubic shaving for vaginal births is a practice with an assumed rationale of infection prevention (Goer, Leslie & Romano, 2007:33S). However, evidence from a

systematic review by Basevi & Lavender (2001) shows no effectiveness. According to these authors, the maternal infection rates do not differ between shaved and unshaved women. Otherwise, shaved women experience irritation, superficial scratches, burning and itching. Based on the mentioned evidence, it would be needless, or otherwise harmful, to routinely shave mothers for normal childbirth.

Intravenous Infusion

Routine intravenous infusions are known to be an interference with the natural process and restrict women's freedom to move (WHO, 1999:10). This fact is compounded by findings of a systematic review by Goer et al (2007:35S). This review also established that routine intravenous infusions during normal labour cause discomfort and stress on the mothers. On the other hand infusion of excess fluids would cause anaemia and a reduction of colloid osmotic pressure and subsequent oedema. Similarly, electrolyte free solutions would cause hyponatraemia on the mothers while glucose solutions can cause neonatal hyperglycaemia. According to the WHO (1999:10), even the prophylactic routine insertion of an intravenous cannula invites unnecessary interventions. It is therefore judicious to avoid intravenous infusion in normal labour as much as possible.

Artificial Rupture of Membranes

Artificial rupture of membranes (ARM), also known as amniotomy, is used routinely because it is believed to shorten labour. Evidence has shown that early ARM reduces the duration of labour by an average of between 60 and 120 minutes (WHO, 1999:22; Enkin et al. 2000:335; Goer et al. 2007:38S). However, this seems to be the only benefit.

This practice is subsequently meant to reduce the number of caesarean sections due to slow progress and improve neonatal outcomes by reducing exposure to prolonged labour. On the contrary, routine ARM does not reduce the caesarean section rates, neither does it have clinically significant neonatal benefits (Goer et al. 2007:38S). Rather, according to these authors, is thought to increase the risk of a non-reassuring foetal heart rate.

Besides a non-reassuring foetal heart rate, another significant risk of ARM is increase of maternal and neonatal infection rates (Goer et al. 2007:38S). For example, Enkin et al. (2000:335) acknowledge that in HIV infected mothers, ruptured membranes for more than four hours before delivery increases the risk of neonatal infection. A similar unsuitable outcome of ARM is cord prolapse (Roberts, 1997 & Usta, 1999, quoted in Goer et al. 2007:39S)

The WHO's take on ARM is that, in normal labour there should be a valid reason to interfere with the spontaneous timing of the rupture of the membranes during first stage of labour (WHO, 1999:22).

Restriction of Food and Fluids

Labour, as the term denotes, has been described by Nzama et al. (2004: 13-7) as an activity that requires high energy resources requiring fluid and food. However, there is a belief that food and drink should be withheld or severely restricted once labour begins (Enkin et al. 2000:258). This is based on the widespread concern that eating and drinking during labour puts women at risk of aspirating stomach contents during regurgitation common with the use of general anaesthesia (Enkin et al. 2000:260;

Goer et al. 2007:36S). Save for the meagre chance of general anaesthesia when mothers are in normal labour.

However, aspiration is thought to play a very small role in maternal mortality and yet the likelihood of aspiration is vanishingly small (Goer et al. 2007:36S; Enkin et al. 2000:260). Similarly, according to Goer et al. starving is also insignificant in reducing the risk of aspiration. This could be partly because no length of time since previous oral intake guarantees having a stomach volume below the danger threshold of 25 ml (Carp, Jayaran & Stall, 1992). Therefore, fasting or not fasting during labour, an empty stomach is not really assured.

Fasting before and during labour comes with its vices. These include risks of dehydration and ketosis and a subsequent reduction in the intensity of uterine contractions (Enkin et al. 2000:261; Nzama et al. 2004:13-7). These risks do subsequently increase the use of intravenous infusions during normal labour and childbirth and can necessitate active management of labour and instrumental delivery (Goer et al. 2007:36S). Therefore it is imperative that women are not restricted of oral intake before and during labour.

For oral intake during labour rather than fasting, Enkin et al. (2000:261) recommend the use a low residue, low fat diet with the aim of providing palatable, attractive and small meals at frequent intervals. Otherwise, in most instances labouring mothers show a preference for drinking and instinctively avoid heavy meals (Nzama et al. 2004:13-7). Thus, a light, nutritious and easily absorbable diet would be most preferable (Royal College of Midwives- RCM, 2005:63).

Labour Augmentation and Uncontrolled Oxytocin

Oxytocin is frequently used to expedite labour after either spontaneous or artificial rupture of the membranes. The combination with early amniotomy is often called "active management of labour" (WHO, 1999:23). When oxytocin for augmenting labour is necessary, Enkin et al. (2000:337) have advised that the clinicians should avoid hyperstimulation. These authors recommend a more moderate approach in oxytocin administration in which small doses are increased at half hourly intervals in response to uterine contractility. This is best done using an infusion pump.

2.6.2 Second Stage of Labour

This section will discuss the practises that will be relevant from the time the cervix is fully dilated to the birth of the baby. The coverage will include routine interventions, continuous labour support and spontaneous pushing in upright or gravity neutral positions.

2.6.2.1 No Routine Intervention

The routine interventions that will be refereed to during second stage are episiotomy, fundal pressure and restriction of food and fluids.

Episiotomy

Episiotomy is defined as a surgical incision into the perineal tissue to enlarge the vaginal outlet to expedite delivery (de Kock, 2004: 14-12). Irrespective of the type of episiotomy, the technique of timing and performing an episiotomy are paramount. For this reason, de Kock advices that it should be performed when the perineum is bulging and when 3 cm to 4 cm of the head is visible (crowning).

Evidence does not support claims that liberal use of episiotomy reduces the severe perineal trauma, improves perineal healing, prevents foetal trauma or reduces the risk of urinary stress incontinence after delivery (Enkin et al. 2000:298). Thus an episiotomy should be meant to hasten delivery only if labour suggests that the mother has become distressed or that progress has ceased (Enkin et al. 2000: 295). Practically, Liljestrand (2007) comments that episiotomy should only be used on strict, well-defined indications in any health care setting where births are assisted. Thus, the practice should be restricted mainly to foetal indications (RCM, 2006:71).

Fundal Pressure

Chalmers & Porter (2001:81) have also thought that presence or absence of the use of fundal pressure during normal childbirth is a form of augmentation. This practise is thought to increase maternal discomfort and may be harmful for the uterus, the perineum and the foetus (WHO, 1999:25).

Restriction of Food and Fluids

This has been discussed in a similar subheading in first stage above. However, it may not be possible to have food intake during second stage. Therefore, nutritious drinks or water would be most preferable (Nzama et al. 2004:13-7).

2.6.2.2 Continuous Labour Support

Continuous labour support has already been discussed under first stage. Notable should be that support should run throughout the labour process. Therefore, even during second stage the support persons should be people the mother trusts and feels comfortable with (WHO, 1999:12-13).

2.6.2.3 Spontaneous Pushing in Upright or Gravity Neutral Positions

Frequently, hospital staff coach women to push their babies out and direct them in forceful and sustained pushing as soon as cervical dilatation of ten centimetres is documented (Sakala & Corry, 2008:54). However, there is no evidence to suggest that women need to be taught when and how to push (RCM, 2005: 68; WHO, 1999:24; Enkin et al. 2000:290). These sentiments have also been complimented by Sakala & Corry (2008:54) who acknowledge that staff directed pushing does not appear to confer presumed benefits of shorter labour and improved foetal status.

Although staff directed pushing results in somewhat shorter second stages of labour (WHO, 1999:25), the long duration of breath holding (10 to 30 seconds) can cause respiratory-induced alterations maternal heart rate, compression of the distal aorta when the mother is supine and reduced blood flow to the uterus and compromise of foetal oxygenation (Enkin et al. 2000:291). Staff directed pushing also appears to increase the likelihood of late foetal heart decelerations and depressed Apgar scores (Enkin et al. 2000:291) and the frequency and severity of perineal trauma in mothers (Bossoworth & Bettany-Saltikov, 2006).

Thus, WHO (1999:24) and Enkin et al. (2000:290) have advised that the physiological approach is to wait until the woman feels the urge to bear down herself. In this regards, of importance is to support the mother's spontaneous expulsive efforts which involve exhalatory bearing down efforts (WHO, 1999:24).

It is important at this point, to emphasize the 'spontaneity' of expulsive efforts and the 'exhalatory' bearing down efforts. The former is purely natural and out of the

mother's control while the latter is the effort of the mother. Both should be supported by the midwife: Protect the spontaneous efforts and avoid additional effort by the mother. Sheila Kitzinger, in her elaboration, gives advice to both the mother and the midwife on how the two aspects should be taken care of. To the mother, she advises; 'avoid deliberate breath-holding and breath when you wish, focus on relaxing and opening as you push, when you feel the pressure of your baby's head at the perineum, release the muscles of your lower face and throat, and breathe your baby out rather than push it out. To the midwife: Avoid stimulating the uterus, do not tell her to hold her breath, and do not tell the mother when and how to push, wait for the spontaneous urge. (Kitzinger, 2006:46-47)

Besides the spontaneity of pushing during second stage of labour, women are often confined to the supine or dorsal position to deliver (Declercq et al. 2006:3; Tita et al, 2005 ; Maimbolwa, 2004 ; Lugina et al. 2004 ; Thérèse et al. 2007; Khalil et al. 2005). However, according to a systematic review by Gupta et al. (2006), upright or semi-upright positions have shown more benefits than supine positions. These include a reduced duration of second stage (mean 4.28 minutes), fewer instrumental births, fewer episiotomies, less severe pain in mothers, fewer fetal heart rate abnormalities. However, these authors also observed that lateral or upright positions were associated with an increase in second degree perineal tears and increased estimated blood loss greater than 500 millilitres.

Lavender & Mlay (2007) concur with Gupta et al. (2006)'s recommendations. They also acknowledged that given the methodological limitations of the trials and the cautious interpretation of the authors, it is reasonable to recommend that each woman

should be allowed to choose her preferred birthing position for the second stage of labour.

A number of non-supine positions that are useful include: semi-sitting position, hands and knees position, left lateral position and squatting or kneeling position (de Kock, 2004: 14-3-14-5). Others include the use of a birthing stool (Klein, 2003:146).

2.6.2.3 Immediate Care of the Newborn

This section encompasses the practise category which requires that there be no separation of the mother and her baby and that there should be unlimited opportunities for breastfeeding.

2.6.2.4 Early Skin to Skin Contact

Immediately the baby is born, it should be put in skin to skin contact with the mother, a concept known as early skin to skin contact (SSC). Early skin-to-skin contact is defined as placing of the naked baby prone on the mother's bare chest at birth or soon afterwards within 24 hours. Anderson et al. (2006:3) have classified skin-to-skin contact into three- birth (first minute), very early (within 30-40 minutes) and early (anytime during the first 24 hours). Need be, according to these authors, the infant is suctioned while on the mother's abdomen or chest, thoroughly dried and covered across the back with a pre-warmed blanket. Ideally, all other interventions are delayed until at least the end of the first hour post-birth. The mother may wear a gown that opens in front, and the baby is placed inside the gown so that only the head is exposed. Most importantly, the mother and baby are in direct ventral to ventral skin-to-skin contact and the infant is kept dry and warm (Saloojee, 2007).

Anderson et al. (2006:2) note that current practice diverges from evolutionary history where neonatal survival depended on close and virtually continuous maternal contact. SSC also has basis in animal behaviour. Studies done on animals have shown that innate behaviours of neonates that are necessary for survival are shown to be habitat dependent (Anderson et al. 2006:2). Alberts (1994) quoted in Anderson et al. (2006:2) gives an account of mammalian biology where the maintenance of the maternal milieu following birth is required to elicit innate behaviours from the neonate and the mother that lead to successful breastfeeding, and thus survival. According to Alberts, separation from this milieu results in immediate distress cries and protest-despair behaviour. Distress cries in human neonates immediately after birth are commonplace, even used in newborn wellness scoring or APGAR scoring (MOH, 2006). In humans, routine separation shortly after birth as Anderson et al. (2006:2) agrees is only unique to the 20th century.

Skin to skin contact between the mother and the baby right after birth and during the first 24 hours postpartum, in comparison with usual hospital care, has been associated with improved performance on measures of breastfeeding status and duration, improved newborn temperature regulation, reduced newborn crying, and more affectionate maternal behaviours and less feelings of incompetence and lack of confidence. There is also some evidence of long term effects like reduced risk of subsequent child abuse and neglect. There are also no apparent short or long-term negative effects. (Anderson et al. 2006; Enkin et al. 2000:430).

It is therefore imperative that all babies be put on skin-to-skin contact immediately after birth and maximized within the first hour of birth. All routine infant care can be

done with baby skin-to-skin with mother, including assigning Apgar scores and obtaining vital signs (Romano & Lothian, 2008: 101).

Saloojee, (2007) agrees that irrespective of the level of the facility, it is advisable that within the first 30 minutes of birth dry and place the naked infant, with or without a cap, upright on the mother's bare chest between the breasts.

2.6.2.5 Early Initiation of Breastfeeding

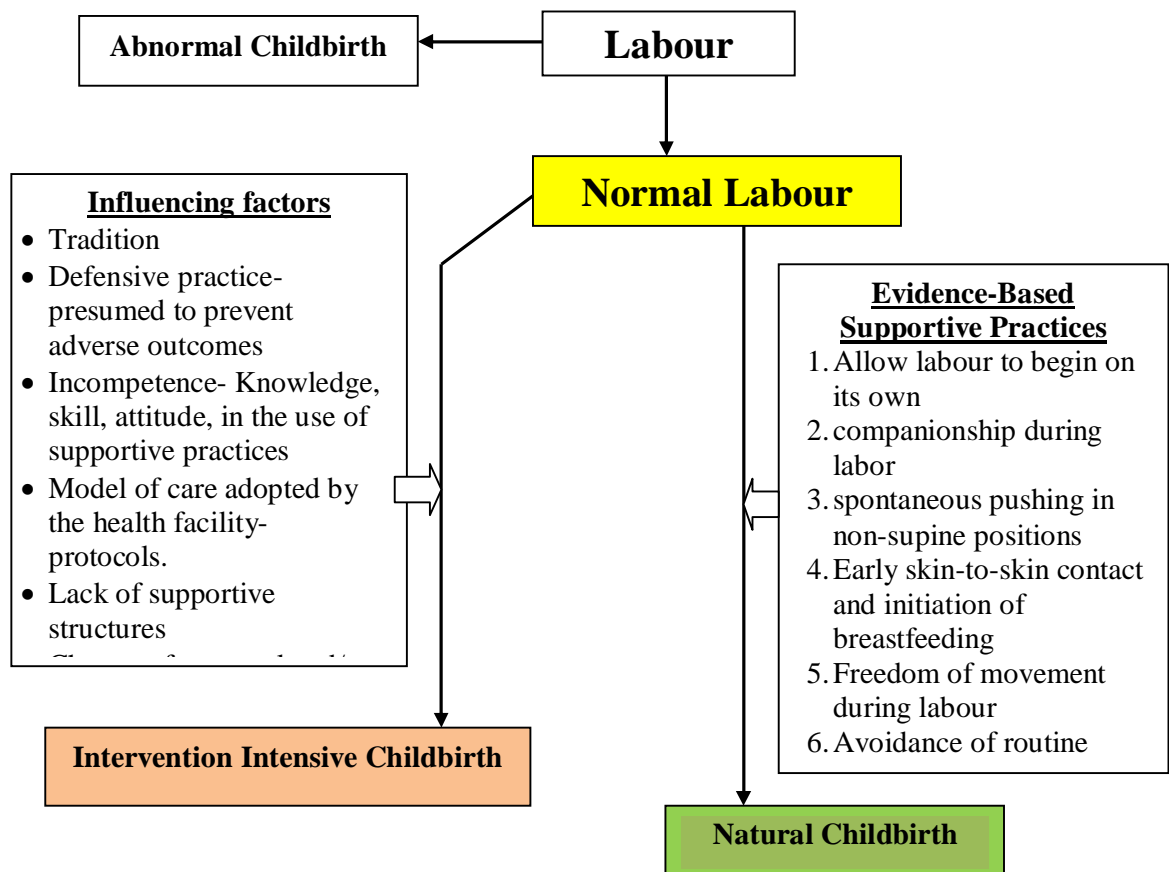
It would be automatic that, after giving the baby to the mother immediately after birth, breastfeeding will ensue. It is required that initiation of breastfeeding is done within the first 30 minutes (WHO, 1999). According to WHO (2008:K2), the mother should be assisted to initiate breastfeeding when the baby seems to be ready. The signs of readiness to breastfeed are; baby, looking around, mouth open and maybe sucking, and searching. According to WHO (2008:K2) the neonates are usually ready to breastfeed within the first hour of birth.

2.7 Conceptual Framework

This chapter has described the history care during normal childbirth, the current situation across many settings and the ideal evidence based normal childbirth care practices as recommended by WHO and Lamaze. It is imperative that care practices of midwives in MTRH be gauged against these practice recommendations. The chapter then describes some of the factors influencing the implementation of the practices and the role of the midwives. Below is a description of the conceptual framework applicable for this study.

Normal labour, according to this study, would be according to the WHO technical definition (WHO, 1999). According to this definition, the mother and the fetus have to be normal throughout the process. However, not all labours that begin as normal will end with normal outcomes. On the other hand, however normal the labour will be, often the midwives would manage it like abnormal labour. However, if the midwives embraced the evidence based practices that promote and support the normality of the process, the outcome will be a natural childbirth. This is as depicted by the figure below.

Figure 1: Conceptual Framework: Childbirth Care Practices



CHAPTER THREE

RESEARCH METHODS

3.0 Introduction

This chapter presents the study design, area and population. The chapter also describes in detail the instrument and how the researcher sampled, collected and analysed data and ensured validity and reliability of the study. Then, description of the ethical considerations and the limitations of this study are given.

3.1 Research Design

According to Nieswiadomy (2002:125) a study design is a pattern or a recipe for a study which is concerned with the overall plan of gathering data. This was a descriptive survey. Descriptive research has been defined by Kerlinger & Lee quoted in Burns and Grove (2007:24) as ‘the exploration and description of phenomena in real life situations... (to provide) an accurate account of characteristics of particular... situations’. For this reason, the study described the practices of midwives during normal childbirth care.

3.2 Research Technique

Research technique concerns the measurement strategies devised (by the researcher) to examine or measure the concepts of interest (Nieswiadomy, 2002:91). In this study, data was collected using structured observation and key informant interviews.

In structured observation measurements, the researcher carefully defines what is to be observed and how the observations are to be made, recorded and coded (Burns & Grove, 2007:37). Structured observation is only possible when the researcher has

prior knowledge about the phenomenon of interest. Checklists are then used to indicate whether the behaviour occurred and the observer only needs to indicate the frequency of occurrence of the behaviours as structured (Burns & Grove, 2007:37; Nieswiadomy, 2002:224). The observation checklist (Addendum III) that was used in this study was structured based on the practices which fall under the five categories of practices that respect normality of childbirth as proposed by WHO and Lamaze.

Although observation is thought to be more subjective than other types of measurement, it was desired in this study because it is the only possible approach to describe midwives' practices which are not included in regular documentation of care (Burns & Grove, 2007:375). It was possible to make a checklist based of the individual behaviours of midwives while caring for the mothers in labour because the practices were measured against the WHO, Lamaze and Kenyan national guidelines.

On the other hand, key informants, according to Burns & Grove (2005:316) can furnish information useful for determining and addressing needs. Structured key informant interviews were conducted to elicit the constraints and opportunities of the midwives in attaining the practices observed. The interviews were conducted with the aid of an interview guide (Addendum IV).

3.3 Study Population

Population has been defined by Kerling & Lee (2000) quoted in Burns & Grove (2007:40) as all elements (individuals, objects or substances) that meet certain criteria for inclusion in a study. The population in this study was the midwives working in the

MTRH labour ward. At the time of the study, the labour ward had 29 registered midwives.

3.4 Sampling

Sampling is the process of selecting a part of a group under study (Rossouw, 2003:108). However, in this study, all the midwives were included in the study. By the end of the study, 28 midwives had been observed. The midwife in-charge of the labour ward could not be observed because of her managerial duties which do not give her a chance to care for laboring mothers.

Since births are unpredictable, they were conveniently sampled. Convenient sampling involves choosing readily available people or objects for a study (Nieswiadomy, 2002:177). Therefore each midwife was observed taking care of any of the mothers undergoing normal childbirth according to the WHO's definition. This was from first stage of labour to one hour after birth. Each midwife was observed attending to one normal birth. The observation was done during convenient shifts within the study period.

The inclusion criteria for the midwives was all trained and registered midwives who are partaking in the care of mothers undergoing normal childbirth and who consented for the observations within a period of one month from March to April, 2010. The midwives were selected conveniently. All the 28 midwives that were observed consented and were included in the study.

Then, two midwife key informants were interviewed to obtain the opportunities and constraints for practice. These were: The midwife in-charge of the reproductive health unit and the midwife in-charge of the labour ward.

3.5 Data Collection

Data collection is defined by Burns & Grove (2005:42) as systematic gathering of information relevant to the research purpose or the specific objectives, questions, or hypotheses of a study.

Before the conduct of the study, permission was sought from the MTRH administration after ethical clearance from the Moi University and MTRH Institutional Research and Ethics Committee (IREC). With the letters of permission from the hospital administration and IREC (Addendum VI and V respectively), the researcher approached the manager of the maternity unit and the Midwife in-charge of the labour ward and informed them of the study and sought their cooperation.

Research assistants were used to collect data. The research assistants were senior diploma level midwifery students. The choice of midwifery students was because of the following three reasons; they are conversant with the process of labour, are exposed to the labouring environment and they were easily available. These research assistants were trained by the researcher on the aims of the research, the nature of the practices to be observed, the sampling strategy and completion of the checklist. Owing to its objectivity (Strydom, 2005:280b) the research assistants assumed the role of total observer. This was by passively observing the practice of midwives. In

the course of care, practices performed by other providers other than the midwives were considered not applicable.

Prior to data collection, the 29 midwives were allocated random codes by the researcher. These codes were shared among all the research assistants so that every research assistant could link the names of the midwives as they were in their rotation schedule with the allocated codes. The research assistants then ensured all the midwives were observed. However, the midwife in-charge of the labour ward could not be observed because of her managerial duties.

The researcher allocated the research assistants convenient day and night shifts within the study period. Thus, there were up to two research assistants during a particular shift. At the beginning of a shift, any of the research assistants on duty approached any midwife and sought written informed consent. Then, the research assistant waited until a targeted midwife had been allocated to take care of a client on admission to the labour ward. At the point of admission of individual mothers to the labour ward in first stage of labour, with the assistance of the selected midwife, the research assistant then selected the mothers based on the inclusion criteria. Then a written consent was sought from individual mothers (Addendum II) on admission to labour ward before observation.

Data was collected using a structured observation checklist (Addendum III). The checklist was compiled by the researcher and validated by two experienced researchers. It was implemented by four trained research assistants while observing the care of labouring mothers. This was from the time of admission of the mothers in

the labour ward until an hour after birth. The checklist (Addendum III) was completed by recording dichotomous data, which according to Burns & Grove (2007:375) is indicating whether or not the practices as structured occurred. These included practices during first stage of labour, second stage of labour and some practices relevant in the immediate care of the newborn.

One research assistant was observing one midwife while taking care of one birth at a time. Upon completion of observation of one midwife, the research assistant thanked the mother and the midwife for assisting in the study before observing the next midwife. Data collection was completed after the 28 midwives had been observed. This number excludes the midwife in-charge of the labour ward who could not be observed.

After completion of the observation, key informant interviews were administered. Two midwife leaders were interviewed using an interview guide (Addendum IV). This was to elicit the constraints and opportunities in attaining the practices. These two were the reproductive unit midwife in-charge and the midwife in-charge of the labour ward. The interviews were tape recorded and then transcribed.

3.6 Data analysis

Data analysis is conducted to reduce, organize and give meaning to the data (Burns & Grove, 2005:43). Data collected was analysed by the researcher using the Statistical Package for Social Sciences (SPSS) version 12.0. Here frequencies were run.

Frequencies are a listing of all scores or numerical values from a set of data and the number of times each score appears (Nieswiadomy, 2002:245-251).

The transcribed interviews were analysed using themes and subthemes.

3.7 Pilot Study

Bless & Higson-Smith (2000:155) quoted in Strydom (2005:206c) defines a pilot study as a small study conducted prior to a larger piece of research to determine whether the methodology, sampling, instruments and analysis are adequate and appropriate. The pilot study for this research was conducted in MTRH.

A structured observation checklist was administered on four student midwives while attending to one mother undergoing normal births each. All the four research assistants were involved in the pilot study. Findings of this study were used to refine the instrument.

The key informant interview guide was administered on one midwife and refined for the study. The midwife interviewed here was from among the midwives that were observed. The findings of this interview were not included in the final study.

3.8 Validity

Validity is the extent to which an empirical measure accurately reflects the concept it is intended to measure (Babbie, 2004:143, quoted in Delpont, 2005:160). The types of validity that were regarded are: Content validity, face validity and internal validity.

Content validity regards how much a measure covers the range of meanings included within the concept (Babbie & Mouton, 2003:122). The observation checklist was structured to include five practices identified by Lamaze International as practices that respect normality of birth. These practices are also among the WHO's classification of evidence based normal childbirth care practices (WHO, 1999) and therefore reflects content validity.

Face validity is concerned with whether the measurement technique looks as if it measures the variable that it claims to measure (Delpont, 2005:161). In this study, face validity was ensured through the use of an unambiguous, highly structured observation checklist (Addendum III). This checklist was evaluated by Dr. Renette Myburg and Mrs. Rotich, who are both expert midwives.

Internal validity is the extent to which the effects detected in the study are a true reflection of reality rather than the results of extraneous variables (Burns and Grove, 2005:215). The observation checklist was highly structured with questions that reflect the content of the five categories of practices that support normal childbirth. Thus, there was no likelihood of loss of data since checklists were used on each birth observed. The checklist was also pilot-tested and refined before the study. In addition to structuring the observation checklist, the researcher used research assistants as opposed to observation by the self. All the above were in a bid to enhance internal validity. Although there are many events that could influence the conduct of midwives including the influence of history, this research was prone to the halo effect. The halo effect was minimized by the presence of participant observers who were

'total observers'. There was also a risk of observation bias which was minimised by the structuring and pilot-testing the checklist.

3.9 Reliability

Reliability is a matter of whether a particular technique, applied repeatedly to the same subject, would yield the same result each time (Babbie & Mouton, 2003:119). This was ensured by the use of a structured observation checklist. In the checklist, more than one question was used to measure the same category of practices.

The research assistants were senior midwifery students. The choice of senior midwifery students is because of their understanding and familiarity with the process of childbirth. However, if people are to become good instruments of data collection they must be trained to observe on such a way that accuracy is maximized and biases are minimized (Polit & Hungler, 1991:331). These were recruited based on their availability and trained on the aims of the research, the nature of the practices of the midwives to be observed, the sampling strategy and completion of the checklist by the researcher.

Similarly, data was collected on both day and night shifts. All the midwives that were observed practise only in MTRH- therefore, were supposed to be guided by the same practice guidelines. Before and during the study, the research assistants were allowed to discuss and share so as to make sure that they completed the checklists in the same way. On the other hand, the researcher reviewed all the completed checklists with the research assistants at the end of every shift to ensure that they were properly

completed. The checklist was pilot-tested and refined before the study to ensure that it was reliable.

To ensure overall reliability of this research, theory triangulation was ensured. The practice categories being studied are as proposed by the WHO's classification of normal childbirth care practices. These practices have been synthesised, summarized, adopted and promoted by the Lamaze International, a normal childbirth institute as the categories of practices that respect the normality of childbirth. The practices in the categories have been replicated by the Kenya National Guidelines.

3.10 Ethical considerations

The term ethics implies preferences that influence behaviour in human relations (Strydom, 2005:57a). Researchers have an ethical responsibility to protect the rights of human research subjects (Burns and Grove, 2005:181) According to these authors, the human rights that require protection in research are: the right to self determination, the right to privacy, the right to anonymity and confidentiality, the right to fair treatment and the right to protection from discomfort and harm. The following is a discussion on how the researcher upheld these rights in the study.

3.10.1 Right to Self Determination

This right holds that human beings are autonomous agents with the right to self determination (Burns and Grove, 2005:181). According to these authors, researchers treat prospective participants as autonomous agents by informing them about a proposed study and allowing them to voluntarily choose whether or not to participate. Therefore the participants should give an informed consent, defined by Nieswiadomy

(2002:42) as concerning subjects' agreement to participate in research in which they have full understanding of.

In this study, the nature and aims of the study as well as reasons why they were selected for the study was explained to the midwives and the mothers as elaborated in the respective consent forms (Addendum I and II respectively). Thereafter, the midwives and then the mothers signed the consent forms. There was no deception concerning the purpose of the study. It was explained that the observation was to be throughout the childbirth process. The consent form also outlined the risks, discomforts and benefits. The mothers and the midwives were assured of confidentiality and were offered a chance to ask any questions whenever they arose.

Before consenting, the midwives and the mothers were assured that their participation was voluntary and they were granted the opportunity to withdraw from the study at their free will.

3.10.2 Right to Privacy

Privacy is a right an individual has to determine the time, extent and general circumstances under which personal information will be shared with or withheld from others (Burns & Grove, 2005:186). No names of the mothers or the midwives were written on the checklists. Instead, the checklists were coded based on codes generated by the researcher and shared only with the research assistants. On receiving the checklists from the research assistants at the end of each shift, the checklists were kept under lock and key of only the researcher's access.

3.10.3 Right to Anonymity and Confidentiality

According to Burns & Grove (2005:188) confidentiality is the researcher's management of private information shared by a subject that must not be shared with others without the authorization of the subject. Burns and Grove (2005) also regard that complete anonymity would only exist when the subjects' identity cannot be linked, even by the researcher, with his/her individual responses. In order to ensure confidentiality in this study, the data collected was inaccessible to anyone apart from the researcher and the research assistants. However, though complete anonymity was impossible (since the researcher and the assistants saw and/or knew the midwives), anonymity was maximized by ensuring that names of midwives or mothers are not written on checklists. Instead, the codes for the midwives as understood by the researcher and the research assistants were written on the checklists. Thus, no information could be traced to any of the midwives.

3.10.4 Right to Fair Treatment

The right to fair treatment is based on the principle of justice. This principle states that people must be treated fairly and receive what they are due or owed (Burns & Grove, 2005:189). According to these authors, the selection and their treatment during the course of study should be fair.

In this study, the selection of midwives was fair because all the midwives that were employed by MTRH in the labour wards and were working during the study period were observed. The midwives were also given a chance to withdraw from the study willingly.

3.10.5 Right to protection from discomfort and harm

Strydom (2005:58a) holds that (research) subjects can be harmed in a physical and/or emotional manner. This gives the researchers a task of protecting the subjects from any form of discomfort and harm.

This study, being observational in nature, may have posed some discomfort or emotional harm especially on the midwives and mothers. This was averted by explaining the purpose and process of the study to the mothers and the midwives before gaining consent. The midwives and the mothers were offered an opportunity to withdraw from the research whenever they wished. The midwives were given an opportunity to pose any concerns whenever they arose.

3.11 Study Limitations

This was a time consuming observational study since the research assistants had to observe all the midwives attending to one normal birth each. The researcher does not rule out the Hawthorne effect. On the other hand, observation bias could only be minimized and not eliminated by structuring the observation checklist and proper training of observers. Other limitations of the study include the unavailability of record review supplement the observation data and limited key informant interviews. There was also limited time to collect the data. The study could not be able to describe the differences in practice of the midwives during the day and at night. On the other hand, there were a limited number of midwives to be observed. Lastly, since the births were conveniently sampled, the representativeness of the sample would be questionable.

3.12 Summary

This study utilized the descriptive study design. Structured observation and key informant interviews were used to collect the data. The observation was structured and recorded on a dichotomous checklist based on the midwives' practices. This was then followed by key informant interviews to elicit the constraints and opportunities for the midwives' practices.

CHAPTER FOUR

FINDINGS

4.0 Introduction

A total of 28 midwives were observed taking care of 28 mothers undergoing normal birth according to the WHO definition. The midwife in-charge of the labour ward could not be observed because of her managerial work. Then two midwife key informants were interviewed. The following is the presentation of the data according to the stage of labour.

4.1 First Stage of Labour

4.1.1 Freedom of Movement

Regarding the positions assumed by the mothers during first stage, the position most assumed and second most assumed was lying in bed (13, 46.4% and 10, 38.5% respectively). Other positions most assumed were walking about (10, 35.7%), sitting on bed (4, 14.3%) and squatting (1, 3.6%). Other positions second most assumed were kneeling (6, 23.1%), walking about 4, 15.4%), sitting on bed (3, 11.5%) and standing (3, 11.5%). These are as depicted in the *table 1* below.

Table 1: Positions during First Stage

Positions	Most Assumed		Second-most Assumed	
	<i>Freq. (n=28)</i>	%	<i>Freq. (n=26)</i>	%
Walking about	10	35.7	4	15.4
Kneeling	0	0	6	23.1
Squatting	1	3.6	0	0
Lying on Bed	13	46.4	10	38.5
Sitting on Bed	4	14.3	3	11.5
Standing	0	0	3	11.5

Both key informants, regarded lack of space as the main constraint in freedom of movement. One regarded that the mothers don't have much freedom of movement '*...because the rooms are a bit small and the only space they can move around is the corridors*'. Yet the other regarded that '*... in the corridors there is a lot of traffic, the mothers don't feel free when they are moving around in the corridors*'.

However one of the midwives appreciated that although space is a limitation, in the current labour ward, space is an opportunity. She stated that '*...as opposed to other labour wards that I have seen at least there is... some space that can allow that (movement)*.' Another opportunity implementing is information. Both the midwives regarded that the midwives are '*getting to understand*' the importance of freedom of movement owing to '*regular trainings*'.

4.1.2 Continuous Labour Support

Eight (28.6%) of the mothers had lay companions during first stage, 5 (62.5%) of whom were their mothers. The other three companions were a partner, a friend and a grandmother. Five (62.5%) of the companions were with the labouring women for less than 50% of the time while 2 (25%) stayed for more than 50% of the time. Only 1 (12.5%) companion stayed with the mother all the time.

Five constraints ensuring companionship emanated from the two midwives; fear on the side of companions, lack of space, unaccompanied clients, lack of information and rigid cultures. One regarded that '*...some men, like, when you tell them to come in, they say no, no, no.*' About space, one of the midwives appreciated the use of curtains in the same delivery room with reservations that '*sometimes one mother is screaming on one side, there is a man the other side, then a curtain is drawn and then the man sees what he is not supposed to see.*' One of the midwives also recounted that '*sometimes somebody can be alone, so they don't really have a choice.*' Lack of information was mainly from the midwives side. Both the midwives thought that the midwives did not fully understand the importance of companionship. One of the midwives exposed what the midwives thought of the role of the companions ('*...they (midwives) thought it's just to be there and... look at what they (midwives) are going to do, but I'd say that they (midwives) are yet to know the real scientific aspects behind the whole thing (companionship).*'). Otherwise one of the midwives regarded the role of culture in the low uptake of companionship by men: '*I think society has really not understood because (they think) birthing is a women's affair.*'

The opportunities elicited included information of the practice of companionship and availability of seats for the companions. Both the midwives regarded information as one opportunity behind the practice of companionship; *'when it began (sometime early 2009) there was a bit of resistance especially from the staff (midwives), I think they were thinking like, the companions were going to disturb them, but what we did was to bring out the role clearly, that the companion will do this, and will not take over the midwives' work. So now the midwives have taken it to be a positive issue. And so far they are appreciating it'*. Space also emanated as one of the opportunities. According to one of the midwives, *'the current space can allow for the companion to be in'*. Lastly, the presence of stools was regarded as another opportunity; *'Somebody donated for us the seats where the companions can sit comfortably.'*

4.1.3 Routine Interventions

The routine interventions regarded here include pubic shaving, intravenous infusion and uncontrolled oxytocin, artificial rupture of membranes, and restriction of oral intake.

Pubic Shaving

There was no routine pubic shaving. The main opportunity associated with the elimination of routine pubic shaving is information. One midwife acknowledged that *'...we have staff who have knowledge that shaving is not evidence based'*.

Intravenous Infusion and Uncontrolled Oxytocin

Regarding intravenous infusions during first stage, most of the mothers (17, 60.7%) were infused in one way or another. Of the mothers infused, 14 (82.4%) were given

oxytocin mostly in normal saline (12, 85.7%) or 5% dextrose (2, 14.3%), while the other three got plain fluids. Two of the three mothers who were infused with plain fluid got 5% dextrose while the other one got normal saline.

The constraints in ensuring no routine intravenous infusion are: Maternal condition and lack of understanding. One of the midwife recounts one incident of a client in need of intravenous infusion: *'...she was asking for it (intravenous infusion) herself and she said that she was feeling weak and she came in advanced labour from home and actually when I looked at her she was dehydrated.'* According to another midwife, some midwives lack adequate understanding on the indications of use of intravenous infusions leaving islands of routine intravenous infusion in the place of oral intake during labour. She says; *'...there are instances where the midwives might give IVFs without proper indication, but we try to discourage them. It has been a practice that any mother who comes in labour, they are put on IVFs, and they think that mother should not take orally when in labour, or they always think about c/s:'*

The opportunity elicited is information. Both midwives appreciated the role of continuous education of the midwives in discouraging routine use of intravenous infusions.

The elicited constraints in ensuring that there is not routine oxytocin administration in normal labour are perceptions of the midwives and anxiety. One of the midwives regarded that the practice of routine oxytocin is based on; *'The conception people have from the old practice that if you think the mother is not pushing you just give oxytocin'*. On the other hand, one midwife attributed the routine use of oxytocin to

anxiety in some midwives, about the status of the foetus and the mother. She says that; *'sometimes people (midwives) want the baby to come out and many a times midwives are very anxious- they feel that the longer the mother stays in labour the more complications will come and they think about the baby- that it might come out asphyxiated or something.'*

The lack of infusion pumps was elicited as the main constraint in ensuring oxytocin administration is controlled. The magnitude of the constraint is depicted in a statement by one of the midwives; *'It's a bit hard (to ensure oxytocin administration is controlled), but what we do is that the shift in-charges usually go round and see, walk in the room and see, actually if the drops are running and adjust the flow.... If the patient changes position the rate changes.'*

Artificial Rupture of Membranes

ARM was performed on 8 (28.6%) of the mothers. Seven (87.5%) of these mothers had their membranes ruptured at 5-7cm cervical dilatation while the other was done at 8 to 10 cm. Of the 8 mothers who had ARM, 6 (23.1%) were on oxytocin (Active management of labour).

The midwives interviewed attributed the practice of routine rupture of membranes to lack of information and rigidity of some midwives. One of the midwives exposed the extent of lack of clear understanding and thus presents it as a controversy. She says; *'we have tried to minimize it because evidence shows that it does not advance labour especially in primis (meaning primigravidas). But in my view it's still a controversial thing because actually it can assist. So it's still controversial.'* Another midwife

thought some midwives are rigid to change practice and still rupture membranes routinely. She thinks; *'some of them are cheeky and if they still believe in the practice of rupturing membranes they can still do it.'*

Restriction of Oral Intake

Oral Intake during first stage was seen in 17 (60.7%) of the mothers while 11 (39.3%) did not take anything. Most of the mothers who had oral intake took water (9, 52.9%) while the rest (8, 47.1%) took energy fluids.

The constraints of ensuring oral intake for mothers during first stage of labour include: Occasional gas shortages; the workload of the midwives and lack of utensils for the clients. One midwife recounted that *'sometimes when there is no gas for warming the food at night'*. Another regarded that *'sometimes there is so much, and when the work is overwhelming, the midwives may not remember to give the mothers food'*. Again, if the clients are not able to come with utensils to the hospital, they may not be served. One of the midwives acknowledged that *'we ask the mothers to come with their plates to be able to feed'*.

As an opportunity, one of the midwives disclosed of a plan of introducing an admission package in order to counter the lack of utensils; *'We have a proposal of the admission package whereby we have a cup, spoon and plate for all the mothers....'*

4.2 Second Stage of Labour

4.2.1 Continuous Labour Support

During second stage, only 3 (9.7%) of the mothers had lay companions two of who were their mothers while the other one was a friend. Two (66.7%) of the companions stayed with the labouring mothers for more than 50% of the time while 1 (33.3%) stayed with the labouring woman for less than 50% of the time.

The main constraint for companionship in second stage is fear or anxiety of the companions, which could be attributed to lack of exposure. According to one of the midwives; *'There are some (companions) when second stage comes they run away. Literally like yesterday I witnessed one really run away. ...to me I think she was not the best companion. I believe the best companion is the one who has maybe had an experience. But for those ones who have more experience and they have delivered more than once they don't have a problem. I also think men get more emotional at this time and think what is happening to my wife, is she dying ,or something?'*

4.2.3 Routine Interventions

The routine interventions to be covered here include restriction of oral intake during second stage, episiotomy, and fundal pressure.

Restriction of Oral Intake

Only 7 (22.6%) of the mothers had oral fluid intake during second stage which was either water (4, 57.1%) or energy fluids (3, 42.9%).

The constraint of oral intake during second stage is the midwives perceptions that mothers cannot take orally during second stage. One of the midwives recounted thus; *'I find it a bit difficult. Because that time there are a lot of contractions coming in very frequently, and, I don't see a mother really eating at that time, it is a bit difficult. I have never had a mother ask for anything during 2nd stage'*.

Episiotomy

Only 3 (9.7%) of the midwives gave episiotomies none of which was done under local anaesthesia. Two (66.7%) of the episiotomies were given before crowning of the foetal head while the other one was given during crowning. Fourteen (50%) of the mothers however suffered perineal tears. Two (14.3%) of the tears were superimposed on episiotomies. The remaining 12 (85.7%) independent tears were either of the first degree (6, 50%) or second degree (6, 50%). All the tears and episiotomies were sutured under local anaesthesia.

Both the midwives appreciated that the main opportunity in ensuring that there are no routine episiotomies is mentorship of the midwives. One of the midwife said; *'we have senior staff who keep educating the midwives on the indication of episiotomies and that we just stick to the indications and not just routine, and I think that has really picked.'*

Fundal Pressure

Fundal pressure was observed in 1 (3.2%) of the mothers. This was performed during crowning of the foetal head.

The midwives appreciated rigidity of some midwives and lack of information as the constraints behind existence of fundal pressure. One midwife said that the practice is concealed; *'it (fundal pressure) is done most of the time when senior people are not there'*. The other midwife regarded lack of information; *'because of lack of training, and understanding that it is harmful'*.

4.2.4 Spontaneous Pushing in Upright or Gravity Neutral Positions Spontaneous Pushing

All the 28 (100%) midwives instructed the labouring women to push when they expressed the urge to push. Here, the midwives instructed the mothers to push before, during and after crowning of the foetal head. The pushing in all the 28 cases was midwife led.

The main constraints for spontaneous pushing include rigidity and anxiety of the midwives. One of the midwives thought that some of the midwives may have not changed their previous practices. She recounts that; *'some midwives I still get to the curtain and I see them telling the mother to push when she does not have the urge to push. So I think it is a routine thing that was in our head, so when you see the head crowning there you really need to tell the mother to push but I think it is still there but we still need more, you know, to tell them that it is something that is natural and spontaneous'*. Some of the midwives could be anxious of the status of the baby. According to one of the midwives; *'sometimes the midwives want the baby to come out fast, there is that anxiety, and that the baby should come out ..., if something happens you are responsible, so you want that baby out because that is the only way you can be safe'*.

Upright or Gravity Neutral Positions

Before crowning of the foetal head, 20 (71.4%) of the mothers lied in supine: 10 (35.7%) in flat supine and the other 10 (35.7%) in elevated supine. Otherwise, the rest were lying in lithotomy without stirrups (6, 21.4%) and the left lateral (2, 7.1%) positions.

During birth of the baby, the 28 (100%) midwives assisted the mothers in the 'lithotomy without stirrups' position.

Both the midwives perceived lack of exposure of the midwives to the use of upright birthing positions as the main constraint. One regarded that; *'They (midwives) perceive lithotomy as the only position, because they have not used any other'*. The other midwife thought that; *'if the staff are trained, they would understand the concept'*. According to both midwives, the main opportunity for the use of upright birthing positions is the presence of a mentor; *'we have a mentor who uses upright positions'*.

The table below summarizes the observation findings during second stage of labour.

Table 2: Summary of Prevalence of Second Stage Practices

Practice Category	Observable Practice	Prevalence
Continuous Labour Support	Presence of a birth companion	3(9.7%)
Routine Interventions	Restriction of oral intake	21(77.4%)
	Episiotomy	3(9.7%)
	Fundal Pressure	1(3.2%)
Spontaneous Pushing in	Undirected pushing	0(0%)
Upright Positions	Upright positions before crowning	10(35.7%)
	Upright positions during birth	0(0%)

4.3 Immediate Care of the Newborn

The births were all singleton, 26 (92.9%) of whom had an Apgar score of between 8 and 10 whereas 2 (7.1%) had an Apgar score of between 5 and 7.

Under the immediate care of the newborn, findings on initiation of skin to skin contact between the mother and the baby and initiation of breastfeeding will be presented.

4.3.1 Early Skin to Skin Contact and Clumping/Cutting the Cord

Immediately after birth and before clumping or cutting the umbilical cord, 15 (53.6%) of the midwives either gave the babies to their mothers or put the babies on their

mothers. The other 13 (46.4%) midwives put the babies on the bed between the mothers' legs.

Of the babies who were put on or given to the mothers, 6 (40%) were on skin to skin contact while the other 9 (60%) were not on skin to skin contact.

The constraints of initiation of early skin to skin contact between the mother and her baby include; fear of falling and lack of client preparation. Both the midwives regarded that the mother ought to be prepared: *'sometimes the mothers wonder why you are putting the baby on their tummies. So you need to prepare the mothers on the same'*; *'she might even push the baby away because she is not ready maybe she has delivered 4 times and the baby used to be taken away from her and then this time you have to put on her abdomen, she was not expecting it'*. However, the midwives acknowledged information as the main opportunity for implementation of the practice. One regarded that; *'The midwives are aware of the importance'*.

Immediately after cutting the umbilical cord, the babies were given to or remained with the mothers in 17 (54.8%) of the cases. When the babies remained with the mothers, it was on skin-to-skin contact in only 5 (29.8%) of the cases while the other 12 (70.2%) were put on mothers' clothes or wrapped up in linen.

There was separation of the mother and the baby within the first hour of birth in 26 (92.9%) of the cases while the remaining 2 (7.2%) remained with their mothers. For those who were separated, in 17 (65.4%) of the cases, the separation was for less than 15 minutes within the first hour of birth while in the remaining 9 (34.6%) were

separated for between 15 and 30 minutes within the first hour of birth. None of the midwives separated the babies for more than 30 minutes within the first hour of birth.

The main constraint why skin to skin contact is not continued is lack of linen and presence of routine procedures. According to one midwife the lack of linen interrupts skin to skin contact such that the baby has to be transferred to the radiant heater for warmth; *'mothers come with little linen and the hospital really does not have baby linen so it is usually the mother to have enough linen'*. Also procedures like weighing the baby and management of third stage often interrupt skin to skin contact. One midwife regarded that some routine interventions like management of third stage of labour and suturing in case of perineal trauma interrupt skin to skin contact; *'We are also discouraging (separation). That they can even deliver the placenta and even suture the mother with the baby on the tummy (of the mother)'*.

4.3.2 Initiation of Breastfeeding

Regarding initiation of breastfeeding, all the 28 (100%) mothers breastfed their babies after birth. 27 (96.4%) of the midwives supported the mothers on the initiation of breastfeeding. However, the timing of initiation of breastfeeding was varied. Fifteen (53.6%) of the mothers initiated breastfeeding after 15 to 30 minutes of birth. Four (14.3%) mothers initiated breastfeeding within the first 15 minutes of birth. Another 4 (14.3%) mothers initiated breastfeeding after more than 30 minutes of birth. Five (17.9%) mothers initiated breastfeeding after one hour of birth. These findings are as depicted in the figure below.

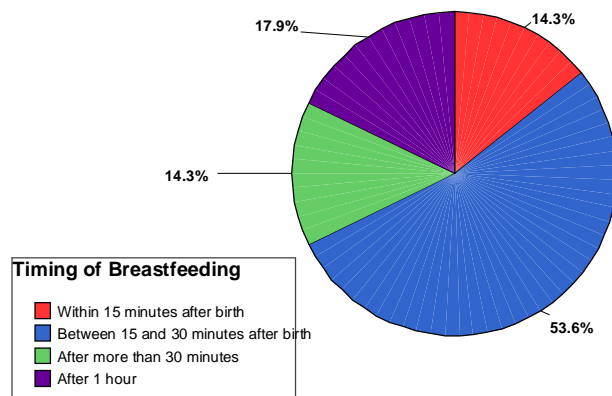


Figure 2: Pie Chart depicting Timing of Initiation of Breastfeeding

The main constraint in ensuring early initiation of breastfeeding includes lack of priorities in the immediate care of the newborn. According to one of the midwives, for example; *'they (midwives) take weighing to be of more priority than putting the baby on the breast'*.

The main opportunities include information. According to one of the midwives, *'most of our nurses have undergone the alarm training- that is the emergency obstetric care, and that (early initiation of breastfeeding) is part of the teaching. And we also keep on reminding them'*.

4.4. Summary of Adherence to Practice Recommendations

The table below summarizes how the midwives adhere to the practice recommendations.

Table 3: Summary of Adherence to Practice Recommendations

Stage of Labour	Practice Recommendations	Observed Practice	Prevalence
First Stage of Labour	Freedom of Movement	No restriction to bed	100%
Labour	Continuous Labour Support	Birth companionship	28.6%
	No Routine Interventions	Pubic shaving	0%
		Intravenous infusion	60.7%
		ARM	28.6%
		no oral intake	39.3%
Second Stage of Labour	Continuous labour Support	Birth companionship	9.7%
Labour	No Routine Interventions	no oral intake	77.4%
		Episiotomy	9.7%
		Fundal Pressure	3.2%
	Spontaneous Pushing	Uninstructed pushing	0%
	Upright positions	Before crowning	36%
		During birth	0%
Immediate Care of the Newborn	Early Skin to Skin Contact (SSC)	SSC immediately after birth	21.4%
		Early Initiation of Breastfeeding	Breastfeeding within 30 minutes of birth

All the practice recommendations apart from the routine interventions are regarded as positive practices whereas the routine interventions are the negative practices. Out of the seven positive practice recommendations above, only two were performed in more than 50% of the cases- freedom of movement during first stage of labour (100%) and initiation of breastfeeding within 30 minutes after birth (67.9%). Continuous Labour Support was low during first stage (17.8%) and even lower during second stage (7%).

Three positive interventions which are easy to implement are seldom done- non-supine birthing positions (36%), early skin to skin contact (21%) and spontaneous pushing (0%). The commonest negative interventions were intravenous infusion (60.7%) in first stage and restriction of oral intake (77.4%) in second stage.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

The previous chapter has presented findings on the practices of midwives during care of normal births. This chapter will discuss the findings according to the stages of labour; first stage, second stage and the immediate care of the newborn, give conclusions and then recommendations.

5.1 Discussion

5.1.1 First Stage of Labour

The practice recommendations that were relevant during first stage of labour include; freedom of movement during labour, continuous labour support and avoidance of some routine interventions.

Freedom of movement in labour and assuming upright positions are meant to facilitate the progress of labour and enhance childbirth satisfaction whereas restricting women's movement may have adverse effects (Storton, 2007:25S; Souza et al, 2006). In this study, it was observed that, although many mothers (35.7%) were mostly walking about during first stage, many more (46.4%) were let to lie in bed which, according to Souza et al. (2006), would hamper the progress of labour. These findings are not very different from those from a study done across four levels of facilities in Tanzania. Here, only 2.9% were mobile during labour whereas an overwhelming 59.8% of the mothers stayed in bed (Lugina et al. 2004:5). In a similar study in Egypt, at least 62% of the mothers were allowed to move during labour (Khalil et al. 2005).

Space as a constraint of freedom of movement was elicited from the interviews. A similar finding was elicited from an audit done at the Kenyatta National Hospital (MOH, 2003). However, the space also arose as an opportunity when the midwives compared their labour ward with other hospitals, which allows for movement.

The benefits of continuous support for labouring mothers have been documented (Hodnett et al. 2006; Simkin & O'Harra. 2002). However, the practice of lay companionship for mothers undergoing normal labour in MTRH is minimal. Only 8 (28.6%) of the mothers had lay companions during first stage, who mostly stayed with the mothers for less than 50% of the time. Similar studies in Egypt found the practice of lay birth companionship equally absent (Khalil et al. 2005). However, based on a national survey in Sweden using the Bologna score, 98.7% of the mothers had companions during labour (Sandin-Bojo, 2008:324).

The midwives presented five constraints for ensuring companionship. Three of the constraints are clients-related; rigid cultures, fear and unaccompanied clients. Zwelling (2008:88) has observed that such factors emanate from the media, who don't depict birth in a positive manner. On the other hand, a Kenyan audit report also pointed out that 'it is a community's attitude that giving birth is a women's affair' (MOH, 2003:27). The provider related constraints of lack of space and lack of information also came up in the report.

The routine interventions discussed hereunder include; intravenous infusions, amniotomy, and restriction of oral intake.

It has been shown that routine intravenous infusions are known to be an interference with the natural process and restrict women's freedom to move, cause discomfort and stress on the mothers and can invite unnecessary interventions (WHO, 1999:10; Goer et al. 2007:35S). However, in this study, a majority of the mothers (17, 60.7%) were infused in one way or another 14 (82.4%) of who received oxytocin. This practice would denote active management of labour which is contrary of physiologic labour. However, administration of oxytocin in combination with early amniotomy is often called "active management of labour" (WHO, 1999:23). This was observed in only 6 (42.9%) of the mothers who had oxytocin. When oxytocin for augmenting labour is necessary, Enkin et al. (2000:337) advised that the clinicians should avoid hyperstimulation. However, this study did not observe how the oxytocin was administered throughout labour.

In similar settings, the rate of labour augmentation is higher. In an Egyptian survey, 91% of the mothers were reported to have oxytocin augmentation whereas 70% of the mothers had oxytocin that was neither labelled nor checked. Routine intravenous infusion in labour was reported in 99% of mothers. (Khalil et al. 2005)

One of the elicited constraints in ensuring that mothers are not routinely infused in labour is maternal condition. However, with proper antenatal care, a number of the risk factors can be allayed. However, of interest is the midwives account of the mother who came in advanced labour dehydrated and requested an infusion. Such a scenario could be because of the widespread failure of the mothers to eat or drink once labour has set in (Goer et al. 2007:36S).

As it has been highlighted in chapter 2, there are reservations to the use of amniotomy (Goer et al. 2007:38S; Enkin et al. 2000:335). In this study, 8 (28.6%) of the mothers had their membranes ruptured artificially. Seven (87.5%) of these mothers had their membranes ruptured at between 5 and 7cm cervical dilatation. In normal labour, according to WHO (1999:22), there should be a valid reason for interfering with spontaneous timing of the rupture of the membranes. In the Egyptian survey, routine early amniotomy was reported in 70% of the mothers (Khalil et al. 2005). These findings could show that the prevalence of artificial rupture of membranes is lower in MTRH.

However, the main constraint arising for the islands of routine rupture of membranes is the lack of information. According to Albers (2007), midwives should always strive to be aware of the evidence behind the discouragement of routine amniotomy.

Mothers undergoing normal labour should have oral intake to facilitate the process and reduce the use of intravenous infusions (Enkin et al. 2000:261; Nzama et al. 2004:13-7; Goer et al. 2007:36S). In this study, 17 (60.7%) mothers were observed to have oral intake during the first stage of labour, 9 (52.9) of who took only water. In a similar study in Zambia, foods and drinks were withheld from labouring women (Maimbolwa, 2004:29). Also in Egypt, none of the mothers was offered foods and drinks during labour.

Though most (60.7%) of the mothers undergoing normal had oral intake, the ideal would be ensuring that all mothers in labour have taken orally. Preferable would be energy foods and fluids depending on the mothers' choice and tolerance.

5.1.2 Second Stage of Labour

During second stage, the relevant practices include; continuous labour support, spontaneous pushing in upright positions and avoidance of routine interventions like restriction of oral intake, episiotomy and fundal pressure.

The implementation of continuous presence of a labour companion is meant to reduce the likelihood of pain medications, caesarean sections, assisted delivery and dissatisfaction with the childbirth experience companion and increase the likelihood of spontaneous vaginal birth (Hodnett et al. 2006; Simkin & O'Harra. 2002). This practice is meant to last throughout labour. During second stage, only 3 (9.7%) of the mothers had lay companions compared to 8 (28.6%) during first stage. As it has been seen above, the practice of labour companionship is common in Sweden and uncommon in Egypt and Zambia- the African countries (Sandin-Bojo et al. 2008; Khalil et al. 2005; Maimbolwa, 2004).

In upraising the constraints in ensuring companionship, a study in Kenya elicited the fear of litigation among providers.

The routine restriction of oral intake, routine episiotomy and fundal pressure will be discussed hereunder.

The number of mothers having oral intake in second stage was only 7(22.6%), 4 (57.1) of who took only water. The rest took energy fluids. The importance of oral intake during labour has been highlighted above. However, the perceptions of the

midwives may be an impediment towards ensuring that mothers can also have freedom for oral intake during second stage.

Regarding the use of episiotomy, this study did not focus on the type of episiotomy given. According to de Kock, (2004: 14-12), paramount is that the episiotomy should be performed when the perineum is bulging and when 3 cm to 4 cm of the head is visible (crowning). Evidence suggest that liberal use of episiotomy does not reduce the severe perineal trauma, does not improve perineal healing, does not prevent foetal trauma and neither does it reduce the risk of urinary stress incontinence after delivery (Enkin et al. 2000:298). In this study, only 3 (9.7%) episiotomies were observed, 2 (66.7%) of which were given before crowning. Comparatively, findings from other African countries indicate relatively higher episiotomy rates. In Egypt, 54% of the mothers were given episiotomies whereas 93% of primiparas got episiotomy (Khalil. et al. 2005). In Cote de Voire, episiotomy rates were peaking 60% in some health facilities with a mean of 24% (Therese et al. 2007).

However, what would be of concern is the timing of the episiotomy. 2 (66.7%) of the episiotomies were not properly timed. This is because they were given before crowning of the foetal head. However, the authors would regard that there could be other reasons for such episiotomies.

Application of fundal pressure is thought to be a form of augmentation (Chalmers & Porter, 2001:81). However, evidence suggests that this practice increases maternal discomfort and may be harmful for the uterus, the perineum and the foetus (WHO, 1999:25). In this study, only 1 (3.2%) case of fundal pressure was observed. This

could be a lot lower compared to an Egyptian survey where 36% of the women experienced fundal pressure. However, the use of fundal pressure is better eliminated from practice

The midwives identified rigidity and lack of information of the harms of fundal pressure. Through, information, according to Romano & Lothian (2008:102) even the rigid midwives can be changed.

The midwives are also meant to ensure spontaneous pushing in upright or gravity neutral positions. Notable is that this practice category covers two sets of practices: Spontaneous pushing and upright birthing positions. These practices are discussed separately hereunder.

Regarding spontaneous pushing, none of the midwives instructed the mothers to push before they expressed an urge to push in second stage. However, the observations in this study about pushing during second stage were similar to Sakala & Corry, (2008:54)'s sentiments that staff direct women to push as soon as full cervical dilatation is documented. All the midwives instructed the mothers to push before, during and after crowning of the foetal head and the pushing in all these cases was midwife-led. According to evidence, instead of shortening labour, staff directed pushing increases the likelihood of foetal distress and perineal trauma (Enkin et al. 2000:291; Bossoworth & Bettany-Saltikov, 2006).

Notable from the findings is that the midwives used the urge to push coupled with documentation of full dilatation as indicators of readiness to push. However, WHO

(1999:24) and Enkin et al. (2000:290) have advised that of importance is to support the mother's spontaneous expulsive efforts which involve exhalatory bearing down efforts (WHO, 1999:24). Ideally, instead of being in control by directing the mothers to push, they should rather teach the mothers their own urge to push. The practice of teaching mothers to breathe their babies out rather than push their babies out (Kitzinger, 2006:46-47), also referred to as the open-glottis method (Adams & Bianchi, 2008:111) is more preferable.

It was apparent that the midwives are often anxious of the foetal and maternal condition and telling the mother to push is meant to speed up the process to avoid any harm. So, as implied by Zwelling (2008:88), this could be another defensive practise employed by the midwives.

Similarly, during second stage, Storton (2007:25S-26S) regarded a variety of upright positions, which include (but not limited to): kneeling, left lateral, squatting, use of a chair or stool and hands and knees position. However, 64.5% of the mothers were supine before crowning of the head, though half of them were in the elevated supine. Unfortunately, all the mothers were lying in the lithotomy position during birth of the baby. The use of non-supine or gravity-neutral birthing positions has also not been documented in similar settings. In Egypt, a study by Khalil et al. (2005) documented that all mothers gave birth in lithotomy with or without stirrups. A similar study in Tanzania established that 98% of the mothers gave birth in supine positions (Lugina et al. 2004). However, there are reports of use of non-supine positions in a private hospital in Kenya (Carrol, 2004:30).

The upright positions have more benefits than supine positions. These include a reduced duration of second stage (mean 4.28 minutes), fewer instrumental births, fewer episiotomies, less severe pain in mothers and fewer foetal heart rate abnormalities (Gupta et al. 2006).

The midwives attributed lack of exposure to the non-use of upright birthing positions. Hence, presence of a mentor who is exposed to the use of upright birthing positions arose as an opportunity.

5.1.3 Immediate Care of the Newborn

The practices included in the immediate care of the newborn include early skin-to-skin contact between the mother and the baby and early initiation of breastfeeding.

Early and continued Skin to skin contact between the mother and the baby within the first hour of birth improves performance in breastfeeding, improves newborn temperature regulation, reduces newborn crying, and lead to more affectionate maternal behaviours and less feelings of incompetence and lack of confidence and reduces incidences of child abuse and neglect (Anderson et al. 2006; Enkin et al. 2000:430). However, in this study, immediately the babies were born, 46.4% were not put given to the mother. In a similar study in Sweden that dwarfed the above findings, 92.3% of midwives ensured early skin-to-skin contact between the mothers and their neonates (Sandin-Bojo, 2008: 324). Nevertheless, sixty percent of the babies put on the mother were not on skin-to-skin.

Again, once the cord was cut, some (45.2%) of the midwives took away the neonates from their mothers. Only 5(29.8%) of those that remained with the mothers were on skin-to-skin contact.

The midwives upraised lack of preparedness of the clients as a constraint in ensuring early skin-skin-contact. Of concern, then, would be, at what point are the mothers supposed to be informed of the practice of skin-to-skin contact? Another constraint was regarding 'fear of falling' which can be countered by the opportunity of information and mentorship that includes demonstration of the procedure. Lastly, routine procedures were raised as the main constraints of continued skin-to-skin contact, which according to another midwife, could be done with the baby on the mother, which augers with the sentiments of Romano & Lothian (2008: 101).

One of the aims of ensuring early skin-to-skin contact between the mother and her baby is to promote bonding and thus ensure successful breastfeeding (Anderson et al. 2006). After observing that 96.4% of the midwives supported the mothers to breastfeed, all the mothers in this did eventually initiate breastfeeding. However, some (14.3%) initiated breastfeeding after 30 minutes of birth while 17.9% did so after the first hour of birth. However, the rate of initiation of breastfeeding is higher compared to findings from a study in Zambia (Maimbolwa, 2004) where less than 50% of the mothers initiated breastfeeding within the first hour of birth.

The few midwives who failed to initiate breastfeeding within the first 30 minutes of birth may have lacked priorities in the immediate care of the newborn. However, such midwives require more information in order to strengthen the practice.

5.2 Conclusions

Regarding the midwives practices during first stage of labour, although some mothers were walking about during labour, many more were let to lie in bed. The midwives attributed this to lack of space in the labour rooms though they thought the midwives can be able to move around in the corridors. The practice of lay birth companionship was observed in MTRH labour wards. Though it is minimal, this practice has not been documented in similar African settings. The practice was attributed to information on the importance of companions and availability of space.

Regarding routine interventions during first stage, the practice of routinely infusing mothers in normal labour is high in MTRH. However, this trend could be attributed to constraints like maternal condition. The hospital also lacks infusion pumps for effective control of oxytocin infusion. Secondly, though lower in other settings, the routine early rupture of membranes is prevalent among midwives of MTRH. Lastly, most of the mothers are allowed to eat and drink during labour in MTRH, however with a few constraints.

Since the practice of lay birth companionship begins from first stage of labour, of concern from this study was that the companions reduce in the second stage. This was attributed to the finding that some of the lay birth companions fear the birth process.

There were also some routine interventions during second stage. Some midwives may not have conceptualized the importance of oral intake for the mothers during second stage. Secondly, episiotomy is not liberally used in MTRH. This trend can be attributed to the opportunity of mentorship that arose from the interviews with the

midwives. Lastly, despite discouragement of fundal pressure in MTRH labour ward, there still exists islands of this practice.

It is common among midwives of MTRH that mothers are instructed to push. However, all the pushing was done after confirming second stage. This was attributed to the midwives anxiety about the state of the baby, and the mother during second stage. Based on this study, the midwives of MTRH are not well equipped with the use of non-supine birthing positions. This could be attributed to lack of exposure of the midwives to the use of these positions.

In the immediate care of the newborn, the practice of early skin-to-skin contact between the mother and her neonate has not been taken up by some of the midwives. Even among those who are practicing it, it lacks continuation, and sometimes it is interrupted by some routine interventions. On the other hand, the rate of early initiation of breastfeeding is considerably high in MTRH than in similar settings. However, some mothers delay initiating up to after 30 minutes of birth while others go beyond one hour. This may be attributed to the lack of prioritization in the immediate care of the newborn by the mothers.

5.3 Recommendations

5.3.1 Practice

During first Mothers undergoing normal labour should be encouraged to ambulate during labour. However, based on the midwives' concerns, the labour ward and the unit management need to ensure that the traffic in the corridors of the labour ward is

limited to mothers and health care providers within the unit so that mothers can feel free to ambulate in them.

The practice of lay birth companionship in MTRH labour wards is commendable. However, it requires further growth and strengthening. The client related constraints in achieving lay birth companionship (fear, rigid cultures and unaccompanied clients) may be averted by ensuring proper antenatal care that includes adequate birth preparedness and male involvement in both antenatal and intrapartum care. However, regarding the constraint of space, the midwives may ensure extra care of the curtains whenever the room has companions. This can be done by ensuring that they are drawn all the time. In case the companion is a spouse, they should be involved in birth planning with their wives to allay anxiety. However, another alternative is for the hospital to adopt the use of professional support companions (doulas).

As concerns the practise or oral intake during labour, it would be prudent therefore that midwives prepare mothers antenataly for oral nutrition before and during labour in order promote progress of labour. The constraints of occasional gas shortages for warming food and lack of utensils for serving mothers are solvable managerially by the midwives and other members of the health care team. Advanced planning can curb gas shortages while the proposed 'admission package' for all mothers can ensure that utensils are not an impediment in ensuring mothers have oral intake during labour.

The hospital administration should strive towards having flow meters for controlled administration of oxytocin, as oxytocin use in labour was common.

To ensure uptake of the use of upright birthing positions, the hospital and the unit administration can facilitate mentorship and exposure of the midwives towards the same. The midwives of MTRH labour ward should be mentored and coached on how to use upright birthing positions by midwives exposed midwives. Exposure to the alternative birthing positions can also be ensured through benchmarking with practicing facilities.

The midwives need to prepare the mothers on admission to labour ward, or even during the antenatal period on the practice skin to skin contact immediately after birth and its importance. This can enable the mothers to even avail appropriate linen for the birth. Important linen may also be provided for within the proposed admission package for mothers. Lastly, the midwives need to be aware that some of the routine practices after birth, that disrupt contact and hence bonding between the mother and her baby, can be done with the baby on the mother. Otherwise, others practices, like weighing the baby, can be delayed until after one hour of birth. This will also ensure early initiation of breastfeeding.

5.3.2 Research

The reasons why some mothers are left to lie during labour instead of ambulating needs exploration. On the other hands, in the juvenile nature of birth companionship in MTRH, there is need to a broader survey of the factors influencing lay birth companionship, to include the clients.

5.3.3 Education

Information about the importance of ambulation in labour is better amplified among the midwives.

Regarding support during childbirth, considering the juvenile nature of companionship in MTRH labour ward, it would be vital to continuously increase information on companionship to clearly bring out the supportive role of the lay companions.

During second stage of labour, although episiotomy is not liberally used in MTRH, this study elicits concerns with the timing of episiotomy. The study recommends that the midwives be informed in order to understand the proper timing of episiotomy and when it is indicated.

To completely eliminate the practice of fundal pressure, all midwives need to embrace evidence through continuous education.

The midwives ought to increase their competencies regarding the management of second stage of labour through information. This should include the best practice of teaching the mothers to follow their own urge to push. It would also be important for the midwives to be informed how to employ the 'open glottis' method of pushing or 'breathe out the baby' instead of 'push' during second stage.

This study recommends that information and mentorship on immediate skin to skin contact be strengthened to target all the midwives.

REFERENCES

- Anderson, G.C., et.al. *Early skin-to-skin contact for mothers and their healthy newborn infants*. Cochrane Review. Oxford: Update Software. 2006.
- Alfirevic, Z., Devane, D. & Gyte G. M. L. *Continuous cardiotocography as a form of electronic foetal monitoring for foetal assessment during labour*. Cochrane Review. Oxford: Update Software. 2006.
- Babbie, E. & Mouton, J. 2003. *The practice of social research*. Cape Town, SA: Oxford University Press.
- Basevi, V., & Lavender, T. *Routine perineal shaving on admission in labour*. Cochrane Database of Systematic Reviews, (1), CD001236. 2001.
- Benoit, C., et.al. Understanding the social organisation of maternity care systems: midwifery as a touchstone. *Sociology of Health & Illness*, 27(6): 722–737. 2005.
- Bosomworth, A. & Bettany-Saltikov. 2006. Just take a deep breath. A review to compare the effects of spontaneous versus directed Valsalva pushing in the second stage of labour on maternal and fetal wellbeing. *MIDIRS Midwifery Digest*. 16:157-66. Available; <http://www.midirs.org/midirs/midweb1.nfs/services?openform>. Accessed: February, 25, 2008.
- Burns, N. & Grove, S. K. *The practice of nursing research: conduct, critique and utilization*, 5th ed. USA: Elsevier. 2005.
- Cahill, H. A. Male appropriation and medicalization of childbirth: an historical analysis. In *The Journal of Advanced Nursing*, 33(3): 334-342. 2001.
- Carp, H., Jayaram, A., & Stoll, M. Ultrasound examination of the stomach contents of parturients. *Anesthesia and Analgesia*, 74(5), 683–687. 1992.
- Carroli G, Belizan J. *Episiotomy for vaginal birth* (Cochrane Review). In: *The Cochrane Library*, Issue 4. Chichester, UK: Wiley. 2006.
- Carroll. J. I. Birth and a Vision: Lamaze childbirth education in Kenya, East Africa. In: *The Journal of Perinatal Education*, 13(3): 27-30, Summer. 2004
- Centre for Evidence Based Medicine (CEBM). Levels of evidence. CEBM. 2002.
- Chalmers, B. & Porter, R. Assessing effective care in normal labour: the Bologna score. *Birth*, 28(2):79–83, June. 2001.
- Coalition for Improving Maternity Services (CIMS).. *The mother friendly childbirth initiative: the first consensus initiative of the coalition for improving maternity services*. CIMS. 1996.

- Declercq, E. R., et.al. *Listening to mothers II: report of the second national U. S. survey of women's childbearing experiences*. New York: Childbirth Connections. 2006.
- De Kock, J. *Second and third stages of labour*. In de Kock, J. & van der Walt, C., eds. *Maternal and newborn care: a complete guide for midwives and other health professionals*. Lansdowne: Juta. p. 14-1- 14-17. 2004.
- Delpont, C. S. L. Qualitative data collection methods. In: De Vos, A. S., Strydom, H., Fouche, C. B. & Delpont, C. L. S. Eds. 2005. *Research at grassroots: For the social sciences and human service professions*. 3rd ed. Pretoria, SA: van Scheik, p159-191. 2005.
- Downe, S. Engaging with the concept of unique normality in childbirth. In: *British Journal of Midwifery*, 1(6): 352-356, June. 2006.
- Enkin, M., et.al. *A guide to effective care in pregnancy and childbirth*. 3rd ed. Oxford: Oxford University Press. 2000.
- Gibson, L. M. *Maternity care for healthy women with normal pregnancies*. Manuscript of Chapter two of 'how normal childbirth got trapped on the wrong side of history'. Available: http://www.collegeofmidwives.org/Manuscript-TWSHx_2008/Ch2_TWSHx_Aug-19-08.pdf. Accessed: December, 2008. 2008a.
- Gibson, L. M. *Practical applications of the new medical science in the later 1800s*. Manuscript of chapter five of 'how normal childbirth got trapped on the wrong side of history'. p34-39. Available: http://www.collegeofmidwives.org/Manuscript-TWSHx_2008/Ch5_TWSHx_08-19-08.pdf. Accessed: February, 2009. 2008b.
- Goer, H., Leslie, M. S., & Romano, A. The Coalition for Improving Maternity Services: Evidence basis for the ten steps of mother-friendly care: Step 6: Does not routinely employ practices, procedures unsupported by scientific evidence. In: *The Journal of Perinatal Education*, 16 (1), 32S - 64S. 2007.
- Gupta, J. K., Hofmeyr, G. J. & Smyth, R. *Position in the second stage of labour for women without epidural anaesthesia* (Cochrane Review). In: *The Cochrane Library*, Issue 4. Chichester, UK: Wiley. 2006.
- Hodnett, E. D., et.al. *Continuous support for women during childbirth* (Cochrane Review). In: *The Cochrane Library*, Issue 4. Chichester, UK: Wiley. 2006.
- International Confederation of Midwives (ICM). 2005. *Definition of the midwife*. Available from: <http://www.internationalmidwives.org/Portals/5/Documentation/ICM%20>

Definition%20of%20the%20Midwife%202005.pdf. Accessed: February, 2008.

International Confederation of Midwives (ICM). *Essential competencies for basic midwifery practice*. Available from: http://www.internationalmidwives.org/Portals/5/Documentation/Essential%20Compsenglish_2002-JF_2007%20FINAL.pdf. Accessed: February, 2008. 2002.

Kennedy, H. P. & Shannon, M. T. Keeping Birth Normal: research findings on midwifery care during childbirth. In *The Journal of Obstetric, Gynecologic, and Neonatal Nursing*, 33(5): 554- 560, September/October. 2004.

Khalil, K., et.al. Hospital practice versus evidence-based obstetrics: categorizing practices for normal birth in an Egyptian teaching hospital. *Birth*, 32(4): 283–290, December. 2005.

Khalil, K., et.al. Routines in facility-based maternity care: evidence from the Arab World. In *The British Journal of Obstetrics and Gynaecology*, 112(9): 1270–1276, September. 2005.

Kitzinger, S. Sheila Kitzinger's Letter from Europe: what's happening to midwives in Europe? *Birth*, 31(1):68-70, March. 2004.

Klein, M. Touch during childbirth: yesterday and today. *Medical Judaica*. IMAJ; 5:145-147. 2003.

Lavender, T. & Mlay, R. *Position in the second stage of labour for women without epidural anaesthesia: RHL commentary* (last revised: 15 December 2006). The WHO Reproductive Health Library, No 10. Oxford: Update Software Ltd. 2007.

Liljestrand, J. *Episiotomy policies in vaginal births: RHL practical aspects* (last revised: 20 October 2003). The WHO Reproductive Health Library, No 10. Oxford: Update Software Ltd. 2007.

Lugina, H., Mlay, R., & Smith, H. Mobility and maternal position during childbirth in Tanzania: an exploratory study at four government hospitals. *BMC Pregnancy and Childbirth*. 4(3). Available from: <http://www.biomedcentral.com/content/pdf/1471-2393-4-3.pdf>. Accessed: February, 2008. 2004.

Maimbolwa, M. C. *Maternity care in Zambia: with special reference to social support*. Stockholm: Repro Print. 2004.

Mati, J. K. G., Aggarwal, V. P., Sanghvi, H. C. G., Lucas, S. & Corkhill, R. 1983. The Nairobi birth survey III: labour and delivery. In *The Journal of Obstetrics and Gynaecology for East and Central Africa* (2):7-56.

- Meyer, B. A., Arnold, J. A. & Pascali-Bonaro, D. Social support by doula during labour and the early postpartum period. *Hospital Physician*, 57-65, September. 2001.
- Ministry of Health, Kenya (MOH). *Kenya National reproductive health instructional manual for service providers*. MOH. 2006 a.
- Ministry of Health, Kenya (MOH). *Essential Obstetric Care Manual: for health services providers in Kenya*. Third edition. Population Council. 2006 b
- Ministry of Health (MOH), *Clinical audit for effective delivery of maternal care in Kenya*. Population Council. 2003.
- Nieswiadomy, R. M. *Foundations of nursing research*. Fourth Edition. Prenhall. 2002.
- Nzama, B., De Kock, J. & Mabale, T. *First stage of labour*. In de Kock, J. & van der Walt, C., eds. *Maternal and newborn care: a complete guide for midwives and other health professionals*. Lansdowne: Juta. p. 13-1- 13-33. 2004.
- Polit, D. F. & Hungler, B. P. *Essentials of nursing research: Methods, appraisal and utilisation*. 4th Edition. New York: Lippincott. p331. 1991.
- Reveiz L, Gaitán HG, Cuervo LG. *Enemas during labour*. Cochrane Database of Systematic Reviews, Issue 4. Art.No.: CD000330. DOI: 10.1002/14651858.CD000330.pub2. 2007.
- Romano, A. M. & Lothian J. A. Promoting, protecting, and supporting normal birth: a look at the evidence. In: *Journal of Obstetric, Gynecologic, and Neonatal Nursing*, 37(1): 94-105. 2008.
- Rossouw, D (ed). *Intellectual tools: skills for the human sciences*. 2nd ed. Pretoria: van Schaik. 2003.
- Rycroft-Malone, J., et.al. What counts as evidence in evidence-based practice? In: *Journal of Advanced Nursing*, 47(1): 81-90. 2004.
- Sakala, C. & Corry, M. P. *Evidence-based maternity care: what it is and what it can achieve*. New York: Childbirth Connection. 2008.
- Sandin-Bojo, A. et.al.. Midwifery care: development of an instrument to measure quality based on the World Health Organization's classification of care in normal birth. In: *Journal of Clinical Nursing*, 13: 75-83. 2004.
- Saloojee, H. *Early skin-to-skin contact for mothers and their healthy newborn infants: RHL practical aspects* (last revised: 6 March 2006). The WHO Reproductive Health Library, No 10. Oxford: Update Software Ltd. 2007.

- Simkin, P. *The birth partner; a complete guide to childbirth for dads, doulas, and all other labour companions*, 3rd ed. Bolton: Harvard Common Press. Available: http://www.amazon.com/Birth-Partner-Third-ChildbirthCompanions/dp/1558323570/ref=pd_bbs_sr_1?ie=UTF8&s=bo oksandqid=1209008300&sr=1-1. Accessed: June, 2, 2008. 2008.
- Simkin, P. P. & O'Hara, M. A. Non-pharmacologic relief of pain during labour: systematic reviews of five methods. In: *American Journal of Obstetrics & Gynaecology*. 186(5, suppl. 1):S131-S159. 2002.
- Souza, J. P., et.al. *Maternal position during the first stage of labour: a systematic review*. Available from: <http://www.reproductive-health-journal.com/content/pdf/1742-4755-3-10.pdf>. Accessed: September, 2008. 2006.
- Storton, S. The Coalition for Improving Maternity Services: Evidence basis for the ten steps of mother-friendly care: Step 4: Provides the Birthing Woman with Freedom of Movement to Walk, Move, and Assume Positions of Her Choice. In: *The Journal of Perinatal Education — Supplement*. 16 (1). Winter. 2007.
- Strydom, H. Ethical aspects or research in the social sciences and human service professions. In: De Vos, A. S., Strydom, H., Fouche, C. B. & Delpport, C. L. S. eds. *Research at grassroots: for the social sciences and human service professions*. 3rd ed. Pretoria, SA: van Scheik. P56-70. 2005a.
- Strydom, H. Sampling and sampling methods. In: De Vos, A. S., Strydom, H., Fouche, C. B. & Delpport, C. L. S. Eds. 2005. *Research at grassroots: For the social sciences and human service professions*. 3rd ed. Pretoria, SA: van Scheik. P192-204). 2005b
- Strydom, H. The pilot study. In: De Vos, A. S., Strydom, H., Fouche, C. B. & Delpport, C. L. S. Eds. 2005. *Research at grassroots: For the social sciences and human service professions*. 3rd ed. Pretoria, SA: van Scheik. P275-285). 2005. c
- Strydom, H. Information collection: participant observation. In: De Vos, A. S., Strydom, H., Fouche, C. B. & Delpport, C. L. S. Eds. 2005. *Research at grassroots: For the social sciences and human service professions*. 3rd ed. Pretoria, SA: van Scheik. P205-216). 2005. d
- Therese, D., et.al. Quality of normal delivery care in Côte d'Ivoire. In *African Journal of Reproductive Health*, 11(1): 22-32, April. 2007.
- Tita, A. T. N., et.al. Evidence-based reproductive health care in Cameroon: population-based study of awareness, use and barriers. In: *Bulletin of the World Health Organization*, 83: 895-903. 2005.
- Turnbull, D., T., et.al. Randomised controlled trial of efficacy of midwife-managed care. *Lancet*. 348: 213–218. 1996.

- World Health Organisation (WHO). *Integrated management of pregnancy and childbirth; pregnancy, childbirth, postpartum and newborn care: a guide to essential practice*. Geneva: Department of making pregnancy safer. 2008.
- World Health Organisation (WHO).. *Evidence led obstetric care: strategies to change practice and policy*: report of a WHO meeting. Geneva, Switzerland, 28-30, January 2004. 2005.
- World Health Organisation (WHO). *Second meeting of the perinatal care task force: report of a WHO meeting*. Bologna. Italy. 26-29 January 2000. Copenhagen: WHO Regional office for Europe. 2001.
- World Health Organisation (WHO). *Care in normal birth: a practical guide*. Report of a technical working group. WHO/FRH/MSM/96.24. Geneva: WHO. 1999.
- Zwelling, E. 2008. The emergence of high-tech birthing. In: *Journal of Obstetric, Gynecologic, and Neonatal Nursing*, 37(1): 85-93.

Addendum I: Consent form: Midwives

Study Title: *Normal Childbirth Care Practices of Midwives in MTRH labour ward*

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Purpose of the Study: This study intends to assess the practices of midwives during their care of mothers undergoing normal childbirth.

Procedure: The researcher will assess these practices using an observation checklist. The checklist will be completed by research assistants while participating in the care of the mothers undergoing normal childbirth.

Benefits: The benefit of this study lies in the evaluation of normal childbirth care. Here, the midwives will be able to learn whether they manage childbirth as a normal life event or as a medical event. Midwives will also ascertain whether the care they offer during normal childbirth is evidence based.

Risk: There is no risk involved in choosing to participate in this study

Confidentiality: No names will be on the checklists used to observe practice and all the information will be considered confidential.

Right to Refuse or Withdraw: Your participation in this study is entirely voluntary and you are free to refuse to take part. You are also allowed to withdraw from the study at any time after accepting.

If you consent, please indicate by signing below:

Signature:..... **Date:**

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Addendum II: Consent Form: Mothers

English

My name is I am assisting *Getanda, N. Amos*, who is a *Master of Science in Nursing (Maternal and Neonatal Health) student* at the Department of Nursing Sciences within the School of Medicine of Moi University, in conducting a research titled: *The normal Intrapartum practices of midwives in MTRH.*

Purpose of the Study: This research looks at how the midwives take care of the mothers in normal labour like you.

Procedure: This requires that I am here to observe how the midwives are taking care of you. We are using a form that contains the practices that we are observing in which I will be marking.

Benefits: This research will look at whether the way the midwives are taking care of you is the ideal way. This research will recommend changes to the care mothers like you receive with the aim of improving the care.

Risk: There is no risk involved in choosing to participate in this study

Confidentiality: No names will be written on the forms and all the information will be considered confidential.

Right to Refuse or Withdraw: Your participation in this study is entirely voluntary and you are free to refuse to take part. You are also allowed to withdraw from the study at any time after accepting.

If you consent, please indicate by signing below:

Swahili

Jina langu ni..... Mimi ni mtafiti msaidizi wa *Getanda, N. Amos*, anayesomea maswala ya *Uzazi katika Idara ya Masomo ya Uuguzi kwenye Shule ya Udaktari* iliyo katika Chuo Kikuu cha Moi. Anafanya utafiti kwa jina: *The normal Intrapartum Practices of midwives in MTRH.*

Lengo la Utafiti: Utafiti huu unachunguza jinsi wakunga wanavyowahudumia akina mama wanaojifungua bila magonjwa ama shida yoyote, kama wewe.

Ratiba ya Utafiti: Utafiti huu unahitaji niwe hapa wakati wote ili niome vile wakunga wanavyokuhudumia. Nitajaza nitayoyoyaona katika fomu.

Umuhimu wa Utafiti Huu: Utafiti huu utatusaidia kujua kama wakunga wanawahudumia itakikanavyo. Kukiwa na upungufu wowote, utafiti huu utatoa ripoti kuhusu uimarishaji wa huduma bora kwa akina mama wanaojifungua.

Hatari: Hakuna hatari yoyote kutokana na kujiusisha na utafiti huu.

Siri: Hakuna majina yoyote yatakayoandikwa kwenye fomu hii na ujumbe wote ni utakua siri.

Kukataa na Kujitoa: Kuhusika kwako kwenye utafiti huu ni kwa hiari. Hii inamaanisha kwamba una ruhusa ya kukataa kujiusisha na utafiti huu. Pia, una ruhusa ya kijitoa kwa utafiti huta wakati tumeshaanza.

Kama umekubali, tafadhali onyesha kwa kuweka sahihi hapa chini:

Signature/Sahihi:..... Date/Tarehe:

Addendum III: The Audit Checklist

NORMAL INTRAPARTUM CARE STUDY			
Instructions: Mark on the correct response in the numbered options			
First Stage- Active Labour			
1.	Which of the following Positions is most assumed by the mother during labour?	1	Walking about
		2	Kneeling
		3	Squatting
		4	Lying on bed
		5	Hands and Knees
		6	Other(specify): _____
2.	Which of the following Positions is <u>second most</u> assumed by the mother during labour?	1	Walking about
		2	Kneeling
		3	Squatting
		4	Lying on bed
		5	Hands and Knees
		6	Other(specify): _____
3.	Has the mother had oral intake during labour?	1	Yes
		2	No
4.	If yes in 3 above, Which of the following Oral intakes is the mother having during first stage of labour? (more than one option allowed)	1	Water
		2	Energy fluids
		3	Solid foods
		4	Both fluids and solid foods
5.	Has the mother had a lay Companion during first stage of labour?	1	Yes
		2	No
6.	If yes in 5 above, Who is the Mother's Companion during first stage of labour? (more than one option allowed)	1	None
		2	Partner
		3	Mother
		4	Friend
		5	Other(specify) _____
7.	Estimate the amount of time the companion stayed with the mother during first stage of labour.	1	100% of the time
		2	More than 50% of the time
		3	Less than 50% of the time
8.	Has the mother had Pubic shaving?	1	No
		2	Yes
9.	If yes in 8 above, where was the pubic shaving done?	1	In the hospital
		2	From home
10.	Has the mother had intravenous infusion during labour?	1	Yes
		2	No
11.	If yes in 10 above, which infusion has the mother had during first stage?	1	Dextrose only
		2	Normal saline only
		3	Dextrose with oxytocin
		4	Normal saline with Oxytocin
		5	Other(specify) _____
12.	How have the membranes ruptured during labour?	1	Spontaneously
		2	Artificially
13.	If artificially in 12 above, state the cervical dilatation at the time of rupture	1	Less than 5cm
		2	5 to 7cm
		3	8 cm and above
14.	Has the mother been encouraged to push before confirmation of 2 nd stage?	1	Yes
		2	No

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Second Stage of Labour		
15	Has the mother had a lay Companion in 2 nd stage (anyone other than the midwife)?	1 Yes
		2 No
16	If yes in 15 above, Who is the Mother's Companion during second stage of labour?	1 Partner
		2 Mother
		3 Friend
		4 Other(specify)_____
17	Estimate the amount of time the companion stayed with the mother during second stage	1 100% of the time
		2 More than 50% of the time
		3 Less than 50% of the time
18	Has the mother had oral intake during labour?	1 Yes
		2 No
19	If yes in 18 above, Which of the following Oral intakes is the mother having during second stage of labour?	1 Water
		2 Energy fluids only
		3 Solid foods only
		4 Both fluids and solid foods
20	Which are the main positions assumed by the mother <u>before crowning/birth</u> of the fetal head <i>(More than one option allowed)</i>	1 Flat supine
		2 Elevated Supine
		3 Left Lateral
		4 Squatting
		5 Lithotomy with stirrups
		6 Lithotomy without stirrups
		7 Other(specify):_____
21	Which are the Main positions assumed by the mother <u>during birth</u> of the baby <i>(More than one option allowed)</i>	1 Flat supine
		2 Elevated Supine
		3 Left Lateral
		4 Squatting
		5 Lithotomy with stirrups
		6 Lithotomy without stirrups
		7 Other(specify):_____
22	Has the mother been instructed to push before crowning of the head?	1 Yes
		2 No
23	If yes in 22 above, had the mother felt the urge to push before instruction?	1 Yes
		2 No
24	Has the mother been instructed to push after crowning of the head?	1 Yes
		2 No
25	Has the mother had an Episiotomy:	1 Yes
		2 No
26	If yes in 25 above, was local anaesthesia administered before giving episiotomy?	1 Yes
		2 No
27	If episiotomy is given in 35 above, when was it done?	1 Before crowning
		2 During crowning
28	Did the mother have a perineal tear?	1 Yes
		2 No
29	If the mother has a tear in 28 above, what is the degree of the tear?	1 1 st Degree
		2 2 nd Degree
		3 3 rd Degree
		4 4 th Degree
30	Was fundal pressure applied at any time during the birth of the baby?	1 Yes
		2 No
31	If fundal pressure in 30 above, When was fundal pressure applied?	1 Before crowning
		2 During Crowning
		3 After birth of the head, before shoulders

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Immediate Care of the Newborn				
32. What is the APGAR score of the baby at the first 1 minute of birth?	1	8 to 10	32	
	2	5 to 7		
	3	0 to 4		
33. Where was the baby put immediately after it was born (before clumping/cutting of the cord)	1	Put on bed between the mothers legs	33	
	2	Put on/given to the mother		
	3	Other (specify) _____		
34. If the baby is put on the mother above, was it on skin to skin contact?	1	Yes	34	
	2	No		
35. Where is the baby put after cutting of the cord	1	Between the mothers legs	35	
	2	Put on/given to the mother		
	3	Taken away		
	4	Other (specify) _____		
36. If the baby is put on the mother after cutting cord above, is it on skin to skin?	1	Yes	36	
	2	No		
37. Was the mother and baby separated?	1	Yes	37	
	2	No		
38. If yes in 37 above, within how long after birth has the mother and baby been separated?	1	Immediately	38	
	2	Within 30 minutes		
	3	More than 30 minutes		
39. What is the Timing of cutting/ clamping of the cord?	1	Immediately after birth	39	
	2	After pulsation		
	2	Done after delivery of placenta		
	3	Done before and after delivery of placenta		
40. Has the mother breastfed her baby after birth?	1	Yes	40	
	2	No		
41. Has she been supported by the midwife to breastfeed her baby after birth?	1	Yes	41	
	2	No		
42. If yes in 41 above, at what time has the mother started breastfeeding?	1	Immediately after birth	42	
	2	Within 30mins		
	3	After 30mins		


Addendum IV: Key Informant Interview Guide

Stage of Labour	Recommended practices against observed practice	Questions: Opportunities	Questions: Constraints
First Stage of Labour	Freedom of Movement- 100%	What are the opportunities in ensuring freedom of movement for all mothers undergoing normal labour?	What are the constraints in ensuring that all mothers undergoing normal labour have freedom of movement?
	Continuous Labour Support <ul style="list-style-type: none"> • Birth companionship- 28.6% 	What are the opportunities in ensuring that all mother undergoing normal labour have birth companions?	What are the constraints that midwives have in ensuring all the mothers undergoing normal labour have birth companions?
	No Routine Interventions <ul style="list-style-type: none"> • Pubic shaving- 0% • Intravenous infusion- 60.7% • ARM-28.6% • no oral intake- 39.3% 	What are your opportunities in ensuring that mothers undergoing normal labour; <ul style="list-style-type: none"> -are not routinely pubic shaven? -do not undergo routine intravenous infusions? -do not undergo routine rupture of membranes? -eat and drink? 	What are your constraints in ensuring that mothers undergoing normal labour; <ul style="list-style-type: none"> -are not routinely pubic shaven? -do not undergo routine intravenous infusions? -do not undergo routine rupture of membranes? -eat and drink?
Second Stage of Labour	Continuous labour Support <ul style="list-style-type: none"> • Birth companionship- 9.7% 	What were your opportunities in ensuring that mothers undergoing normal labour have birth companions?	Which constraints do you meet in ensuring that mothers undergoing normal labour have birth companions?
	No Routine Interventions <ul style="list-style-type: none"> • no oral intake- 77.4% • Episiotomy- 9.7% • Fundal Pressure- 3.2% 	What are your opportunities in ensuring that mothers undergoing normal labour; <ul style="list-style-type: none"> -eat and drink? -do not routinely get episiotomy? -do not undergo fundal pressure? 	What are your constraints in ensuring that mothers undergoing normal labour; <ul style="list-style-type: none"> -eat and drink? -do not routinely get episiotomy? -do not undergo fundal pressure?
	Spontaneous Pushing- 0%	What are the opportunities in trying to ensure that all the mothers undergoing normal labour have spontaneous pushing during second stage?	What are the constraints in ensuring that mothers undergo spontaneous pushing?
	Upright positions <ul style="list-style-type: none"> • Before crowning- 36% • During birth- 0% 	What opportunities to you have in ensuring that mothers give birth in non-supine or upright positions?	Which constraints do you have in ensuring that mothers give birth in non-supine or upright positions?
Immediate Care of the Newborn	Early Skin to Skin Contact (SSC) <ul style="list-style-type: none"> • SSC immediately after birth- 21.4% 	What are your opportunities in ensuring that babies are put on skin-to-skin contact with their mothers immediately they are born?	What are your constraints in ensuring that babies are put on skin-to-skin contact with their mothers immediately they are born?
	Early Initiation of Breastfeeding <ul style="list-style-type: none"> • Breastfeeding within 30 minutes of birth-67.9% 	What your opportunities in ensuring that all mothers initiate breastfeeding within the first 30 minutes of birth?	Which constraints do you have in ensuring that mothers initiate breastfeeding within the first 30 minutes of birth?

Addendum V: IREC Approval Letter



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INSTITUTIONAL RESEARCH AND ETHICS COMMITTEE (IREC)

Reference: IREC/2009/36
Approval Number: 000400

15th May, 2009

Amos N. Getanda,
Moi University,
School of Medicine,
Nursing Sciences Department,
P.O. Box 4606- 30100,
ELDORET.

Dear Mr. Getanda,

RE: FORMAL APPROVAL

The Institutional Research and Ethics Committee have reviewed your research proposal titled:

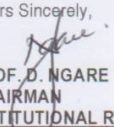
"An Audit of the Normal Intrapartum Practices of Midwives in Moi Teaching and Referral Hospital Labour Ward".


Your proposal has been granted a Formal Approval Number: **FAN: IREC 000400** on 15th May, 2009. You are therefore permitted to continue with your study.

Note that this approval is for 1 year; it will thus expire on 14th May, 2010. If it is necessary to continue with this research beyond the expiry date, a request for continuation should be made in writing to IREC Secretariat two months prior to expiry date.

You are required to submit progress report(s) regularly as dictated by your proposal. Furthermore, you must notify the Committee of any proposal change (s) or amendment (s), serious or unexpected outcomes related to the conduct of the study, or study termination for any reason. The Committee expects to receive a final report at the end of the study.

Yours Sincerely,


PROF. D. NGARE
CHAIRMAN
INSTITUTIONAL RESEARCH AND ETHICS COMMITTEE



cc: Director - MTRH
Dean - SOM
Dean - SPH
Dean - SOD