MIDWIVES' PERCEPTION OF POSTNATAL CARE PROVIDED IN NTCHEU DISTRICT

MSc (Midwifery) Thesis

By

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Declaration

I hereby declare that the thesis "Midwives' Perception of Postnatal Care Provided in Ntcheu District of Malawi" is my own work which has not been submitted for any award at university of Malawi or any other institution. All sources of information used or quoted have been acknowledged.

LUCY NYIRENDA

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Signature

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Date

Certificate of Approval

The undersigned approve that this thesis represents the student's own work and has not been presented anywhere else in or outside Africa.

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Dedication

I dedicate this work to my dear husband Edmond Munthali for the valuable support, encouragement and patience throughout my study period.

To my unborn children, I have faith that God is creating God fearing children who are going to be a blessing to many generations (Deuteronomy 28:4).

God is always faithful!

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Abstract

Postnatal care is one important aspect of maternal and new born health services. The physiological changes which occur in the postnatal period put the mother and neonate at risk of complications that, if comprehensive postnatal care is not given, may result in disability including death. Providing postnatal care therefore, reduces the risk of postpartum complications which cause 60% of all maternal and neonatal deaths.

The study aimed at exploring midwives' perception of postnatal care provided in Ntcheu district health facilities. The study used a cross sectional qualitative design. Data was collected from purposive sampling of 24 participants through focus group discussions and in-depth interviews using semi-structured interview guides. The qualitative data were analysed using thematic content analysis which generated the following themes: knowledge of postnatal care, availability and use of postnatal care protocols, factors perceived to promote delivery of postnatal care and hindrances to effective provision of postnatal care. Descriptive statistics were computed for the demographic variables.

The study findings indicate that midwives in Ntcheu regard postnatal care as important because it helps in identification of complications, which if managed appropriately, lead to health outcomes. Midwives also viewed postnatal period as the time to promote health behaviour through health education and counselling thereby promote health outcomes. Findings revealed that although midwives considered postnatal care as important, midwives failed to provide some of the crucial elements of PNC due to

lack of human and material resources, inadequate space to provide PNC, negative attitude of providers and lack of supervision.

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List of Abbreviations and Acronyms

AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral Therapy
BEmONC	Basic Emergency Obstetric care
CEmONC	Comprehensive Emergency Obstetric Care
COMREC	College of Medicine Research and Ethics Committee
CPD	Continued Professional Development
CPT	Cotrimoxazole Preventive Therapy
DBS	Dried Blood Sampling
DHS	Demographic and Health Survey
EHPR	Emergency human Resource programme
ENM	Enrolled Nurse Midwife
FGD	Focus Group Discussion
HIMS	Health Information Management Systems
HSS	Health Systems Strengthening
HIV	Human immunodeficiency virus

IDI	In-depth interview
ITNs	Insecticide Treated Nets
KCN	Kamuzu College of Nursing
MDHS	Malawi Demographic and Health Survey
MCH	Maternal and Child Health Department
MNH	Maternal and New born Care
MOH	Ministry of Health
NDH	Ntcheu District Hospital
NSO	National Statistical Office
OPD	Outpatient Department
PMTCT	Prevention of Mother to Child Transmission of HIV
PNC	Postnatal Care
PNW	Postnatal ward
PPH	Postpartum haemorrhage
TCA	Thematic content analysis
TEO	Tetracycline Eye Ointment
TTV	Tetanus Toxoid Vaccine

RH	Reproductive Health
RNM	Registered Nurse Midwife
WHO	World Health Organization

Operational Definitions

Postnatal period - is a period from complete expulsion of placenta and membranes up to six weeks.

Postpartum / postnatal care - care given to the mother and neonate immediately after birth until six weeks.

Puerperium / Postnatal - a period after complete expulsion of placenta and membranes up to six weeks during which time the uterus and other organs and structures are returning to their non-gravid state.

Skilled health worker/ Skilled Birth Attendant (SBA)- is an accredited health professional such as midwife, doctor or nurse who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period

Chapter 1

Introduction and Background

Introduction

The period after birth is critical to the health and survival of the mother and the new born because of the rapid physiological changes that occur that puts both at increased risk of developing complications resulting in disability or death. For example, lack of care during this period may result in complications such as postpartum haemorrhage, sepsis, anaemia for the mother and hypothermia, hypoglycaemia, sepsis for neonates. It is estimated that more than 60% of all maternal deaths and 65% of all infant deaths occur in the postnatal and neonatal period (Warren, Daly, Toure & Mongi, 2006; WHO, UNICEF, UNFPA & World Bank, 2012). Postnatal care is also critical in promoting health practices as observations have shown that lack of it creates missed opportunities for health promotion, education and changing of behaviour affecting women and new born (Sines, Syed, Wall, & Warloy, 2007).

There is evidence that the presence of skilled care during pregnancy at birth and in the post natal period contribute significantly to reduction of maternal and new born mortality and morbidity. Global statistics indicate that more than 60% of the 289, 000 mothers who die each year and approximately 65% of all infant deaths occur in the postnatal and neonatal period (UNICEF, WHO, World Bank, & United Nations, 2014; Say et al., 2014). In Malawi strategies to reduce maternal and neonatal morbidity and mortality have focused on pregnancy and delivery period, with little attention given to the post natal period as evidenced by 69% of maternal deaths occurring in the postnatal period in 2010 (MOH (Malawi), UNICEF, UNFPA, WHO, & AMDD, 2010).

Demographic and Health Survey (DHS) data from 23 African countries show that two-thirds of women in Sub-Saharan Africa give birth in health facilities but only 13% receive postnatal care within 48 hours due to lack of postnatal care service (Warren et al., 2006; Sines et al., 2007; Gogia & Sachdev, 2010). The trend is the same with Malawi where observations have shown that out of 71% of mothers who give birth in health facilities, only 42% receive postnatal care within 48 hours of delivery (National Statistical Office & ICF Macro, 2011). This suggests that postnatal care services are not normally offered.

Midwives' role in the postnatal care they provide has received little attention. This has led to study the views of midwives on postnatal care provided at Ntcheu district hospital; Kasinje; Tsangano; Kapeni and Biliwiri health centres.

Background

Post natal care (PNC) is defined as care given to a mother and neonate from birth to six weeks. This is done in order to assess, identify, support and counsel the mother and family on maternal health promotion such as safer sex and family planning. The mother is also counselled on danger signs and need for prompt care seeking if complications arise for both mother and neonate (Fraser, Cooper, Nolte & Myles, 2010)**.** Care provided to the neonate includes immediate and exclusive breastfeeding, warmth, hygienic umbilical cord and skin care.

World Health organization (2006) guidelines on postnatal care recommend that postnatal care for mothers and neonates should be provided at least three to four times. First assessment should be two hours after delivery and within 48 hours before discharge.

Follow up care should be given at 7days and 6 weeks after birth. In Malawi, the 2008 Reproductive Health (RH) standards for postnatal care stipulate that the care be done within one hour after birth and at least twice a day until discharge. Mothers and neonates are discharged 24hours after birth and follow up care is given on outpatient basis at one week and six weeks after birth. It further states that the care should be comprehensive and include taking comprehensive subjective data regarding labour and delivery, physical and psychological well-being of the mother and the neonate, systematic physical and obstetric examination on the woman and neonate. Furthermore the protocol clearly explains that women who give birth outside a health facility are supposed to be referred to a health facility for postnatal check-up within 12 hours of giving birth (MOH, 2007). This is done to provide timely assessment and management of any rising complications to the mother and neonate. Postnatal care provided in Ntcheu district is in line with the Malawi Reproductive Health guidelines**.** In practice, postnatal care is given to both mother and neonate; care in the first hour after birth is usually referred to as fourth stage of labour and is given in delivery suite. For purposes of this study, PNC will be referred to care given to the mother and neonate only after one hour to 6 weeks after birth.

The preventive care practices and routine assessments done by midwives are critical in reducing maternal morbidity and mortality that is globally estimated at 289,000 women dying each year due to obstetric complications of which more than 60% occur during postnatal (UNICEF, WHO, World Bank, & United Nations, 2014). Postnatal care also helps in early identification and management or referral of complications such as postpartum haemorrhage and puerperal sepsis which contribute to 27% and 11% of all global maternal deaths respectively (Hussein & Walker, 2012;

WHO, 2013). In Africa, at least 125, 000 women die in the first week of life with haemorrhage being the leading cause of deaths at 34% (Warren et al., 2006). Postnatal care is also important in reduction of neonatal morbidity and mortality. Globally, more than three million neonates die every year with 25-45% of the deaths occurring within 24 hours (UNICEF et al., 2014). This shows the need to provide essential care in this crucial period.

Malawi has a high maternal mortality ratio of 675 per 100,000 live births (MOH, 2010). According to Malawi Ministry of Health 93% of maternal deaths occur in the health facilities with 69% of the deaths occurring during the post natal period. Postpartum sepsis and haemorrhage accounts for 19% and 14% of all maternal deaths respectively (MOH, 2009; MOH, 2010; National Statistical Office & ICF Macro, 2011). On the other hand, neonatal mortality is also high at 31/1,000 live births with infection and prematurity being the leading cause of neonatal deaths at 30% respectively (National Statistical Office & ICF Macro, 2011; MOH, 2009). The high maternal and neonatal morbidity and mortality indicate the need for provision of comprehensive care in the postnatal period.

Postnatal Care: The Situation in Ntcheu

Ntcheu is one of the districts in the Central Region of Malawi with a total population of 528,088 among these, 147,864 are women of child bearing age (2012/13 NSO projection). The district has 39 health facilities with 26 providing maternal and new born care services. The 2012/13 National Statistical Office (NSO) projection indicates that the district is expected to have 26,404 deliveries.

The district hospital provides Comprehensive Emergency Maternal Obstetric and Neonatal Care (CEmONC) while 6 health centres provide Basic Emergency Obstetric and new born Care (BEmONC) and 19 provide basic maternal and new born care. CEmONC facilities are expected to provide essential postpartum care such as identification and management of minor complaints and complications. BEmONC facilities are equipped with resources for delivery of comprehensive maternal and new born care while the rest of the health centres provide basic maternal and new born care including post natal care. Despite Ntcheu district facilities providing comprehensive and basic emergency obstetric care, complications and deaths of mothers and neonates are still high. For example in 2012, the district reported 517 maternal complications out of which 286 occurred in the postnatal period with the majority of women (152) having postpartum haemorrhage and (74) having sepsis. The district recorded 26 maternal deaths with 11 (42%) occurring during post natal period (Ntcheu Safe Motherhood, 2013; Ntcheu district HIMS, 2013). In the same year, the district had 197 neonatal deaths of which 63 (32%) were due to asphyxia and 88 (44%) were due to infection (Unpublished Ntcheu Safe Motherhood, 2013; unpublished Ntcheu district HIMS, 2013).

Poor PNC could be one major factor for high maternal and neonatal morbidity as evidenced by the Malawi Ministry of Health Emergency Maternal Obstetric and Neonatal care (EmONC) national assessment which shows that out of the 97 facilities that provide postnatal care only 42% of the hospitals and 2% of health centres provide comprehensive basic obstetric care. The increased number of maternal and neonatal complications and deaths in Ntcheu could also be attributed to lack of comprehensive care hence the need to

explore the views of midwives so as to have an understanding of factors that contribute to lack of delivery of comprehensive postnatal care.

In Malawi, studies have identified factors that influence utilization of PNC and assessed quality of PNC to be substandard (Sakala & Kazembe, 2011; Chintembo, Maluwa, Chimwaza, Chirwa & Pindani, 2013). However, no study has been done to investigate the views of providers on the post natal care provided to mothers and neonates. The study will therefore explore the views of midwives on the post natal care currently provided in Ntcheu district.

Problem Statement

Globally, PNC programmes are the weakest among all maternal and neonatal services evidenced by global Demographic and Health surveys (DHS) data that found that 40% of women do not receive any postpartum care (Warren et al., 2006; UNFPA, 2011). Similar results were noted in 23 African countries DHS data that only 13% receive postnatal care within 48 hours (Gogia & Sachdev, 2010). In Malawi, out of 71% of women delivered by skilled personnel, only 43% receive post natal care within 48 hours and 7% receive first post natal check-up between days 3 and 42 (National Statistical Office & ICF Macro, 2011). Although the percentage of women receiving postnatal care in Malawi surpasses the national target of 30% by 2010 as stipulated in the Road Map for accelerating the reduction of maternal and neonatal mortality, the data indicates that 28% of women who are assisted by skilled personnel at delivery do not receive postnatal care. This is similar with Ntcheu district, where only 45.8% and 6.8% mothers receive PNC within 48 hours and between days 3 and 42 respectively (MOH, 2007; National Statistical

Office & ICF Macro, 2011). These results suggest that PNC is a neglected area. Additionally, the results indicate that although skilled providers assist at birth and that key postpartum services be available at a health facility, timely postnatal care is not given to all the mothers. This is supported by Warren et al. (2006) who found that mothers and new-borns die during the post natal period than at any other time because coverage and quality of care is not adequate. There is need, therefore, to examine the factors that contribute to mothers and neonates not receiving adequate postnatal care.

Rationale for the Research Study

Postnatal care is one of the essential pillars of safe motherhood in reducing maternal and neonatal morbidity and mortality. Studies internationally and nationally indicate that women do not receive comprehensive PNC due to inadequate human and material resources as well as unavailability of postnatal guidelines (Lawn, Cousens, & Zupan, 2005; Chimtembo et al., 2013)**.** Lack of comprehensive care in the postnatal period may lead to maternal and neonatal complications including deaths. Obtaining views of midwives who play a leading role in the provision of postnatal care would help in identifying key elements that need to be improved for delivery of essential aspects of PNC. The results may influence review of post natal care protocols and guidelines. The study will also act as a baseline for further research on post natal care in Malawi.

Broad Objective

This study aims at investigating midwives' perceptions of post natal care in Ntcheu district facilities.

Specific Objectives

- Assess midwives' knowledge of post natal care (PNC).
- Explore midwives' views regarding availability and utilization of PNC protocols.
- Examine factors that influence and hinder the provision of post natal care.

Research Questions

- How much knowledge do midwives in Ntcheu have regarding postnatal care?
- What protocols are available for postnatal care?
- How are these protocols utilized?
- What factors do health midwives identify as facilitators to delivery of post natal care?
- What factors do midwives identify as barriers to delivery of post natal care?
- What are the perceptions of midwives regarding the postnatal care in Ntcheu?

Chapter 2

Literature Review

Introduction

This chapter presents a critical summary of the research topic. Polit and Beck (2010) state that literature review aims at highlighting the work that has already been undertaken and identify gaps that need further study.

The literature review contained in this chapter is guided by the objectives of the study. To ensure a comprehensive literature search, computer assisted search using PubMed, EBSCOHost; Google Scholar; Medical Subject headings (MeSH); Cumulative Index of Nursing and Allied health Literature (CINAHL) and WHO websites were used.

Literature search was also conducted by study titles and peer reviewed articles published in English from the year 2000 to 2014. This was done to provide a wider search of information on the study topic which is up to date. Only peer reviewed articles that were related to the topic of study were included. Articles in English language were selected taking into consideration the official language of communication of the researcher which helped in easy understanding of the identified articles. Most of the literature revealed a number of studies that looked at provider's perception of postnatal care outside Malawi but not in Malawi.

The following terms formed the basis of the literature review: components of postnatal care; mothers postnatal care; postnatal care for the neonate; midwives' knowledge of post natal care; availability of guidelines for care; utilization of maternal and new born guidelines and factors that influence provision of PNC.

Midwives Knowledge of Postnatal Care

Postnatal period is the time from complete expulsion of placenta and membrane to six weeks post-delivery. The postnatal period is divided into three because of the severity of the risks the mother has. First 24hours is critical because of physiological changes in the cardiovascular system and since effects of labour may pose an added problem of postpartum haemorrhage due to poor sensation of the bladder as well as psychological effects of labour the mother may have leading to fear to void. Studies have indicated that women do not receive comprehensive PNC due to inadequate resources including unavailability of postnatal guidelines (Lawn et al., 2005; Chimtembo et al., 2013). Lack of care during PNC both hospitalized as well as follow up care at home by either midwives or other related health providers like Health Surveillance Assistance (HSA). Lack of monitoring during this period poses a risk to mothers and neonates because of the physiological changes and adaptations of body systems from pregnancy to pre-pregnant state and from intrauterine to extra uterine environment.

Assessment of maternal stability in the process of adaptation includes vital signs, bladder and bowel functioning, fundal height and vaginal bleeding (Fraser et al., 2010). In Lebanon and Iran, studies to assess postpartum care found that the care was inadequate as only few clients were checked on their well fair, physically examined or having their vital signs checked. The studies also indicated that information on self-care and infant health and family planning was inadequate although a good percentage (42%) received general health education (Simbar, Dibazari, Saeidi & Majda, 2005; Kabakian-Kholashian, et al., 2006).

Such information suggests that without comprehensive health assessment of mothers and neonates during postpartum period health care providers can easily miss both maternal and neonatal conditions which could be easily be prevented and or managed. Additionally, postnatal period (PNP) can be regarded as a window of opportunity for mothers to access information and other services therefore lack of assessment indicates lost opportunity. These studies suggests that PNC can only be properly done when providers have adequate knowledge on the significance of this period to mothers and neonates including adequate knowledge on assessment, to identify any deviations and provide timely intervention and or management; provide appropriate information and services regarding postnatal care (Institute of Community and Public Health, 2010).

Assessing for physical concerns in women can help in identification of health problems that women may not report as a concern if not asked. A study in Kenya by Mwangi, Warren, Koskei and Blanchard (2008) with an aim of developing and introducing a strengthened postnatal care package into health facilities showed that asking women about their well-being and concerns led to proper counselling and intervention in line with client needs. Therefore, assessing client's needs help the midwife identify problems that may not be verbalized voluntarily leading to timely identification of complication as well as timely interventions.

In support of the above studies was a cross sectional study conducted in Dedza Malawi to assess quality of postnatal care provided to women seeking postnatal services. The study found gaps in postnatal health assessment, health education and counselling

(Chintembo et al., 2013). The midwives conducted a full head to toe of mother and neonate before discharge but uterine involution and perineal inspection were not performed to all women. Additionally, most midwives (63%) in government facilities discharged women and neonates without checking vital signs. The same study noted that midwives lacked adequate information on the importance of monitoring postnatal women and neonates because the results found that the midwives' knowledge was that women and neonates are supposed to be examined only on discharge or when a client presents with a complaint (Chimtembo et al., 2013).

Probable factors for such lack of knowledge could be lack of in-service to update on important areas of care and their significance. This is suggested because some providers working in rural areas do not have any frequent supervision, opportunity of having time to read due to lack of materials, and or time. Therefore, frequent supervision and refreshers courses are important for standards and quality care as studies by Khalaf et al. (2009) and Family Care International (2003) conducted in Jordan and Kenya found that health care providers indicated that the care provided include breastfeeding, family planning, laboratory tests; cleaning perineum and counselling on passing urine; changing sanitary pads; breastfeeding; care of the new born; signs of maternal and neonatal complications; nutrition; and immunization.

With such study findings, it is of significant to develop a comprehensive education programme for providers at national level in order to provide high quality postpartum care that meets the needs of mothers and neonates. Such resources can be

used as part of periodic refresher courses and or be distributed to facilities to act as reference manuals.

Health Education and Counselling

Postpartum women and their families require information on how to take care of themselves and their neonates. Studies show that giving information regarding postnatal care during antenatal period help improve in health behaviour during the postpartum period As indicated by Liu et al. (2009) in a randomised controlled trial study conducted in rural Hubei, China. The study found that health and nutrition education intervention that started from antenatal period enabled women to stop using unhealthy traditional postpartum practices and therefore decreased postpartum health problems. The study noted that women who received comprehensive health education and counselling on nutrition and general health from antenatal and postnatal period exhibited significantly greater improvement in overall health and dietary behaviour.

Similar findings were also noted in studies in rural Uttar Pradesh by Varma, Khan and Hazra (2010) where intensifying information on postnatal care from antenatal period helped in the utilization of postnatal services by women. It was found that women who had received advice on PNC during antenatal were two times more likely to seek postnatal check-ups than others. These results indicate the importance of counselling in promotion of healthy behaviour which can be of great importance to the mother and neonate in the postnatal period. Since midwives are the primary care givers in most MNH services, it suggests that they are the right providers as a source of information during

postpartum period (Smith, Dmytraczenko, Mensa & Sidibé, 2004; Institute of Community and Public Health, 2010).

From the findings of the above studies, it can be recommended that midwives need to possess necessary knowledge and skills in management and care of postnatal in order to provide adequate information regarding postnatal care which may help in improving health outcomes for both mothers and neonates.

Protocols and Guidelines for PNC

Use of protocols or guidelines and standards enhances evidence based practices that promote safety and quality of care provided to clients. The 2008 National Reproductive Health (RH) standards in Malawi state that health facilities should have well designed standards and that, health workers should be familiar with service guidelines (MOH, 2007). This suggests that protocols and standards provides current body of knowledge as they are frequently reviewed and updated and therefore can be used as a yard stick for provision of comprehensive quality care.

As part of quality control measures WHO in 2008 introduced standards for midwifery care with the aim of guiding practitioners in taking positive action to improve the quality of care. Malawi based its postnatal care protocols and guidelines on WHO standards and came up with the following: the 2008 RH standards; neonatal care protocols (2004); nursing and midwifery council practical guideline (2008) and 2010 RH standards for subsequent postnatal care for both mother and neonate for health centre,

district and central hospital (MOH, 2004; Nurses & Midwives Council of Malawi, 2008; MOH, 2009).

Studies have shown that presence of protocols or guidelines improve delivery of health services as noted by Warren, Mwangi, Oweya, Kamunya & Koskeki (2009) in an intervention study aiming to assess changes in quality of care following a new comprehensive postnatal package on counselling of postpartum clients. The study noted improved performance of providers in counselling in maternal and new born complications, infant feeding and family planning.

Similarly in Kenya, Mwangi et al. (2008) found that introduction of new postnatal care package in health facilities improved the postnatal care provided especially on assessment of mothers and neonates. The study used an experimental design to assess the quality of care provided in health facilities and compared stratified samples of postpartum women recruited and interviewed following child birth 6 months before and after introduction of the guidelines.

The above studies provide an understanding that when providers have the necessary resources that include materials like guidelines and protocols are effective in improving performance of providers in the delivery of any care including PNC. From these studies, it can also be drawn that presence and utilization of guidelines help in providing appropriate care to mothers and neonates as the providers are aware the significance of such care (Mrisho et al., 2007).

Much as literature indicate that presence of guidelines help to improve delivery of care, other factors play a role like adequate staff to provide such care. Inadequate midwives obstruct quality and comprehensive care according to stipulated guidelines. This is supported by an evaluation of first-time mothers' experiences of postnatal care by the National Childbirth Trust United Kingdom (UK) consumer group that found little improvement in perceptions of hospital care in the ten years since a previous survey by the same organisation despite the introduction of guidelines for care. It was revealed that some women did not receive comprehensive assessment and postnatal care education due to inadequate staff (Bhavani & Newburn, 2010). The results suggest that despite introduction of guidelines for postnatal care, midwives may not adhere to stipulated guidelines due to inadequate providers. Similar findings were revealed in an observational study conducted in Malawi by Chodzaza and Bultemeier (2010) that assessed providers' management of emergency obstetric complications in comparison with the national standards. The study found that there was inconsistent and poor compliance to the standards due to inadequate resources like staffing, poor team work and inadequate supervision.

These study findings, therefore, indicates that apart from having protocols and guidelines and the need for assessing utilization of these protocols or guidelines there is need to check if providers use the protocols to guide their practice regardless of the shortage of staff and other barriers like orientation to using such documents as this can also positively influence the care provided. This is evidenced by an experimental study done by Warren et al. (2008) in Swaziland aiming to repositioning and strengthening PNC that revealed that midwives' knowledge in postpartum care increased when

midwives were oriented on new PNC service guidelines. This shows that orientation of the available protocols or guidelines for care may guide delivery of care hence promote provision of comprehensive care for the mother and neonate.

Furthermore, obtaining feedback and engaging midwives in development of guidelines for care can promote utilization of the guidelines as the midwives will be encouraged to use protocols that they participated in developing and therefore act as an incentive and motivator to care delivery. This is supported by a study carried out in England by Bick, Rose, Weaves, Wray and Beake (2011) that assessed midwives' views of the quality improvement and their engagement with continuous quality improvement. It was reported that midwives were able to meet women's physical and emotional health, information and support needs when providers were engaged to support implementation of changes in guidelines for care. The study also reveals the important of feedback from providers on the care provided in planning of care. Therefore, exploring views of midwives on availability and utilization of protocols and guideline can help identify if the protocols indeed help in improving delivery of postnatal care provided. This is suggested because health providers at the grass root level are more conversant with the issues of their community and therefore are the best people to shade more light on how such issues can be best addressed.

Factors that Influence Delivery of PNC

Adequate human and material resources are believed to promote postnatal care. Studies done internationally and nationally on views of providers identify shortage of health providers as a barrier to delivery of comprehensive PNC. In support of this

statement are studies done in Australia by Rayner, McLachlan, Forster, Peter and Yelland (2010) and Deogaonkar (2004) in India who found that the majority of midwives in both public and private hospital were working on part time basis and thus compromised care as midwives failed to fulfil some of the duties such as assessing clients twice daily and that high midwife patient ratio also was a factor for compromised care respectively. This means full time providers and having a smaller midwife/provider patient ratio increases comprehensive care. Sometimes having skilled midwives and having the correct midwife patient ration may not necessarily be the solution if essential equipment and supplies are inadequate as study conducted by Ziraba, Mills, Madise, Saliku and Fotso (2009) in Nairobi on three delays model observed that out of 25 health facilities assessed, only 2 were providing timely and appropriate health care services. The contributing factors being lack of obstetric skills, equipment and supplies in the facilities.

In Bangladesh, a study that explored views of women family and stakeholders to identify barriers and possible solutions for improving quality of care showed that inadequate human and material resources led to poor quality of care as manifested by poor cleanliness of facilities, long waiting time with less consultation time and inadequate supply of drugs (Chowdhury, Hossain, & Halim, 2009).

In a related study done across western and developing countries to investigate the link between human resource for health and health outcomes, it was discovered that the density of human resource is significant in accounting for maternal and neonatal mortality rate. It was also observed that countries which invested much in recruiting and retaining care providers offered quality health care with subsequent positive health

outcome (Anand & Bärnighausen, 2004). In Malawi, Chodzaza and Bultimeier (2010) also found out that besides shortage of resources, poor quality in obstetric emergency management was due to inadequate skills, poor team work and inadequate supervision. From these studies, it can be drawn that adequate human and material resources as well as appropriate knowledge and skills help providers to give comprehensive care thereby reducing morbidity and mortality.

Inadequate human and material resources have shown to negatively affect delivery of maternal and neonatal care in Malawi as well (MOH, 2010). In dealing with the shortage of staff, the Malawi MOH launched an emergency human resource program (EHPR) in 2004 to recruit and retain health workers, expand the capacity of pre-service training institutions and strengthen human resource management. An evaluation of the programme done in 2010 on number of health workers and health workers' commitment to remaining in the profession revealed an increase in number of health workers by 53% (Rawlins et al., 2011). However, despite the increase in number of providers, an evaluation of obstetric care provided nationally in 2010 found that only 47% of the hospitals and 2% of the health centres were offering complete CEmONC and BEmONC health services respectively (MOH, 2010). The results revealed that inadequate human and material resources contributed to incomplete services. The current study intends to explore midwives perception of the factors that hinder delivery of postnatal service for the mother and neonate.

Supervision of health providers also improves delivery of care. Supportive supervision can lead to higher health worker motivation, increased and sustained job

satisfaction. A study conducted in Senegal by Suh, Moreira and Ly (2007) which aimed at evaluating changes in service quality and community involvement after two rounds of supervision to health facilities found that there was notable improvement in infection prevention practices. Improvement was also noted in management of resources and that led to improvement in care provided to clients. Similarly, Bosch-Capblanch, Liaqat, & Garner (2011) observed that provider knowledge and practice improved in all health centres under study on intensive supervision. The studies provide an understanding that supervision help assure provision of appropriate care.

Inadequate supervision of providers has shown to negatively affect performance, dissatisfaction with services provided and staff turnover (Bradley & McAuliffe, 2009; McAuliffe et al., 2013). An exploratory qualitative study that took place in four rural mission hospitals in Malawi to explore the perceptions of mid-level providers regarding factors affecting their performance and retention within the health system revealed that supervision was extremely limited and almost exclusive corrective in nature. Limited supervision was attributed to lack of officer-grade staff with adequate training to carry out the supervisory role (Bradley & McAuliffe, 2009).

Similarly a large scale survey of mid-level cadre of health workers delivering obstetric care done in Malawi, Tanzania and Mozambique with an aim of investigating dissatisfaction and turnover as a result of poor leadership characterized by inadequate and unstructured supervision was done in 2008. The results showed that in Malawi, 34% of the health workers received formal supervision (regular, pre-arranged supervision

meeting) while 28.7% received no supervision (McAuliffe et al., 2013). The study intends to explore supervision in relation to postnatal care.

Summary

The chapter covered review of previous research studies related to delivery of PNC. The review covered the following areas: knowledge of providers in regards to postnatal care, type of assessment and their significance, counselling on various areas related to maternal and neonatal health and how mothers and neonates are managed during this critical period. Literature has shown that midwives do not have up-to-date knowledge of postnatal care and therefore do not understand the significance of PNC resulting in assessment monitoring and care not taken as a priority during this period. This indicates that PNC is one of the neglected areas of care hence most women and neonate have complications which can easily be prevented, identified early and managed.

Research has noted several contributing factors. The most commonly mentioned being; lack of knowledge and resources that include human, supplies and equipment. Additionally, lack of orientation to current and correct use of available resources including guidelines and protocols and supervision. The literature has also shed light on importance of involving midwives who are primary providers of maternal and neonatal care and services when developing the guidelines and protocols is a positive incentive and motivator to comprehensive care as the providers feel they own the resources.

While literature reveals perspectives of providers on maternal and new born care from different countries, there is limitation of such information in Malawi. Hence, the

researcher would like to explore the perception of midwives on post natal care provided in Ntcheu.

Chapter 3

Methodology

Introduction

This chapter provides details of the study design; study place; study population; sample size and sampling methods; recruitment criteria; data collection procedure; data management and analysis; trustworthiness of the data; ethical considerations; limitation of the study and dissemination of research findings.

Study Design

This study used qualitative design to describe the views of midwives on PNC. Qualitative research design was chosen because there is little known about the views of health care providers regarding PNC in Malawi. Burns and Groove (2009) explain that qualitative research design is one method recommended for research when little is known. Qualitative design therefore was appropriate approach to enable midwives describe their views regarding postnatal care provided to women and neonates.

Study Setting

The study was conducted in Ntcheu district. The district is located in the central region of Malawi with a total population of 513,865 and a projected population of 528,088 out of which 147,864 are women of child bearing age and is expected to have 26,404 deliveries annually (NSO, 2012).

Observations showed that from July 2011 to June 2012, the district had 19,250 deliveries compared to 17,650 deliveries in the past year of similar time period (unpublished Ntcheu 2013 Safe Motherhood report). The district was also chosen because

the 2010 MDHS indicated that out of 78% of women delivered by skilled personnel, only 45.8% received postnatal care within 48hours of delivery which indicate that 32% of mothers delivered by skilled personnel did not receive timely post natal care.

Study Population

In this study, the study population comprised midwives working in antenatal clinic, labour and delivery; post natal ward and family planning clinics. Midwives were chosen because they are main providers of post natal care.

Inclusion and Exclusion Criteria

Certified midwives (registered nurse midwife, enrolled nurse midwife, nursing midwife technician) who had been providing postnatal care for six months and above were invited to participate. It was assumed that midwives who had worked for at least six months had adequate experience to provide comprehensive description of their views regarding postnatal care. All midwives on orientation; student midwives and other cadres were excluded from the study.

Sample Size

The sample of the study comprised of 24 midwives of which 17 participated in focus group discussions (FGD) and 7 in in-depth interviews (IDI). The IDIs were done with 7 key informants comprising of the district hospital nurse managers; labour and postnatal wards in-charge, and nurse-midwives from the four health centres. Thus in total the study conducted 3FGDs and 7IDIs. Walsh and Baker (2004) state that the most common number of participants within a focus group is 6. An average of 5 to 6

participants were selected for each focus group so as to give every participant opportunity to express an opinion in order to get diverse perspectives information regarding postnatal care.

Atypical sample in qualitative studies as suggested by Leedy and Omrod (2010) is from 5 to 25 participants. In this study, the total number of participants was 24.

Sampling Method

Purposive sampling was used to select participants among the participants who met inclusion criteria. Purposive sampling was chosen because there was need to have participants with rich information pertaining to provision of postnatal care in the health facilities.

Participants for the study were chosen with support from the departmental in-charges and facility managers for the district hospital and health centres respectively. Recruitment of participants was done after the researcher had explained about the study. Participants who met the inclusion criteria were selected from a list given by the departmental in-charge and facility managers. The focus groups composed of nursing midwife technicians, enrolled nurse midwives and professional registered nurse midwives. Nurse midwives with same cadre were grouped together. This was done to provide a non-threatening environment so that all participants were able to give their perspectives. Participants were informed of the study by telephone one week before the day of data collection. Participants were also given an information sheet and asked to complete and sign a written informed consent before interviews/focus group discussions.

Data Collection Procedure

The researcher was involved in identification of participants who met the inclusion criteria for the study. Each participant was assigned a code from 01 to 07 which were used as a unique identifier to help separate data of each participant during data collection and analysis. The researcher conducted one interview per day in order to transcribe the interview the same day to reduce loss of important information and also to avoid confusing and mixing data of different groups.

To promote confidentiality, the researcher used Ntcheu district hospital library for the focus group discussions while in-depth interviews were done in a private room identified at respective health facilities. The interview room doors were kept closed throughout the interview sessions to ensure that other health care providers did not hear the conversations. This was done to guarantee confidentiality.

The researcher sought consent (Appendix 4 b & c) which was signed before conducting the interviews as both the interviews and focus group discussions were digitally recorded. Furthermore, before the interviews began, the researcher explained the purpose and importance of the digital recorder and asked permission from participants to use it. Besides digitally recording the data, field notes on each interview were recorded in a field journal. Each participant was served with a bottle of soft drink to provide a relaxed atmosphere.

Data Collection Instrument

In this study, semi-structured interview guides (Appendices 3a & 3b) were used for the focus group and in-depth interviews. Semi-structured interviews were chosen to

enable midwives describe their knowledge and factors that contribute to delivery of comprehensive postnatal care according to their perception of postnatal care. In-depth interviews were done to have detailed information regarding contributing factors to delivery of comprehensive postnatal care. Polit and Beck (2010) explain that in-depth interviews help the researcher to obtain as much detail as possible from people with rich information. Interviews were done in English as all participants were midwives and English is the mode of communication at work place hence there was no need to translate the instrument into local language. The focus group discussion took one hour and 15 minutes while in-depth took approximately 45 minutes. The researcher allowed enough time for the participants to give adequate information so that quality data was retrieved.

Pretesting of Interview Guides

Prior to data collection, the focus group discussion and interview guides were tested through a pilot study at a community hospital in Ntcheu district. Pre-testing of interview guides was done to refine questions that seemed vague to participants.

Data Management and Analysis

Data files and recorder were locked in the drawer of the researcher's study table which was only accessible by the research team. The audio digital recorder narrative data were downloaded into a computer and transcribed verbatim within 24hours. Analysis of data was conducted concurrently with data collection. This was done to identify recurring regularities on the emerging themes in the data (Braun & Clarke, 2006). Participants were consulted to clarify on areas that needed clarification to confirm whether the transcripts

reflected their responses. The researcher did not improve or grammatically correct the sentences so as to capture the participant's own words. All responses were directly quoted in participant's own words.

In qualitative studies, significance of data analysis is to discover themes and links among the themes (Polit & Beck, 2010). In this study, Thematic Content Analysis (TCA) approach was used to analyse the data. In TCA, the researcher extracted a list of common themes from the text of responses in order to get expression of repeating voices across participants (Anderson, 2007). To achieve thematic content analysis in this study, the following steps were followed:

- Interview transcripts were printed and all relevant descriptions were marked and highlighted. Thereafter,
- Highlighted areas were marked with distinct unit of meaning (codes) which were later grouped according to their similarities and differences.
- Categories were then derived from the grouping and regrouping of similar and dissimilar codes.
- The researcher re-read the grouped texts to identify meaning of significant words underlined in each category which led to the development of themes and sub themes presented in the study.

Trustworthiness

To ensure trustworthiness, the scientific rigor criteria used in qualitative methodology identified by Lincolln & Guba (1985) which assesses the credibility, dependability, transferability of the findings was applied (Polit & Beck, 2010).

Credibility

In this study, rich data were collected from experienced midwives who provided postnatal care in maternal and child health (antenatal, family planning clinics, labour and delivery and postnatal ward). The researcher used probes to ensure that participants are encouraged to give detailed information. To avoid bias, the researcher captured both positive and negative perspectives with regard to provision of postnatal care. The interview guides were reviewed and refined with the help of experts in the field of maternal and neonatal health and experts in research methodology. This was done to ensure trust worthiness of the data. After research, an independent person and supervisor with research expertise were requested to review transcripts and identified themes.

Dependability

To achieve dependability of the data, analysis of data was done following thematic content analysis by Anderson, 2007. The researcher requested a colleague with knowledge of qualitative analysis to analyse a portion of the data independently using the same steps to ensure comparable themes with those of the researcher.

Conformability

Conformability ensures neutrality of the data such that the researcher is able to distinguish personal values from those of the participants (Polit & Beck, 2010). This was achieved by recording all the words spoken by participants and the researcher in order to distinguish the participant's data from interviewer's view. Notes on observation of participant's behaviour during the interviews were written in a field journal to assist in interpretation of the participant's response. The researcher also documented observation about her assumption, reactions or biases that could have influenced collection and interpretation of the data (Ulin, Robinson, & Tolley, 2005).

Transferability

Transferability describes how qualitative findings can be applicable and meaningful to individuals not involved in the research (Speziale & Carperrter, 2007). To ensure transferability in this study, inclusion and exclusion criteria, data collection method and context of data collection were described. The researcher also ensured transferability by an in-depth interpretation and discussion of the data collected as presented in the study report. Conclusions from the study are transferable to midwives in similar settings.

Study Period

The study period was 12 month. The activities included research area conceptualization, literature review, proposal write up, proposal submission to College of

Medicine Research and Ethics Committee (COMREC), data collection, data analysis and report writing (Appendix 2).

Dissemination of Study Results

Study results will be communicated verbally to the academic staff of Kamuzu College of Nursing (KCN) during research seminars. A written report will also be presented to KCN Post Graduate Academic Committee and another copy will be placed in the KCN library. Other copies will be sent to Ministry of Health, Reproductive Health Unit Directorate and Ntcheu District Health Office. Research findings will be published in nursing and midwifery journals.

Ethical Consideration

Research proposal was submitted to KCN research and publication committee and COMREC for approval (Appendix 5). Study proposal was given to the two research committees to have a clear picture of what was going to happen. After approval, permission was sought from Ntcheu District Health Office to conduct the study at the facilities.

All participants were informed about the details of study (appendix 4a). Participants were informed about the purpose, benefits and risks of the study. Participants were also informed that they had the right to refuse or withdraw from the study at any point and that no penalty shall be granted upon such a decision. Participants were duly informed that there were no monetary and other benefits for taking part in the study. Before proceeding with the interviews, participants were allowed to ask question and a written consent in agreement to their willingness to participate was sought.

There were no perceived risks in participating in the study. However, participants were informed that in case of any emergency, a response team would be provided for timely intervention. To ensure confidentiality, participants were given codes for identification. Participants were also assured that there would be no identification of participants on publication or presentation of the findings. Data files and recorder were locked in the drawer which was only accessible by the research team. All electronic data was secured with a secret password only accessible to the principle investigator.

Chapter 4

Presentation of Findings

Introduction

The study was conducted in 2013 at Ntcheu district hospital library as well as selected health centres affiliated to Ntcheu District hospital as follows; Kasinje, Biliwiri, Kapeni and Tsangano health centres. Data was collected from 12th to 30th December, using semi-structured interview guide. The interviews were recorded with the permission of the participants and were transcribed within 24hrs. The total number of participants was 24. However, 25 participants were approached but one could not participate due to tiredness since she was on night duty before the day of interview. This represented a response rate of 96%.

The study population comprised of midwives of different cadres working in maternal and child health (MCH) department, postnatal and maternity wards at Ntcheu District Hospital (NDH) and selected affiliated health centres. Maternity ward comprises of a combination of labour and delivery suite, postnatal unit and antenatal women with risk conditions. The Maternal and Child Health department (MCH) was included because one and six week's postnatal care is provided by midwives from MCH.

The sample of the study comprised of 24 midwives, 17 participated in focus group discussions (FGD) and 7 participated in in-depth interviews (IDI). Thus in total the study conducted 3FGDs and 7IDIs.

The FGDs were conducted at Ntcheu district hospital, while two of the IDI were with midwives from the district hospital and five with midwives from the four health centres. The in-depth interviews were done with in-charges as these are key personnel for their units/departments. The key informants comprised of the district hospital nurse manager; labour and postnatal wards in-charge, and five nurse-midwives (nursing and midwifery technicians and enrolled nurse midwives) from the four health centres. FDG participants were registered nurse midwives, enrolled midwives and nursing and midwifery technicians working in various wards of the maternity units/departments.

The results will be divided into five categories which will later be subdivided into themes as follows:

1. Demographic data
2. Knowledge of postnatal care
3. Availability and use of PNC protocols / guidelines
4. Factors perceived to promote delivery of postnatal care
5. Hindrances to effective provision of postnatal care.

Demographic Data

The demographic data will be composed of the age range; academic qualifications; professional qualifications; years of experience; department currently working and years worked in the current department. Such information will highlight type of the participants and providers currently available at Ntcheu district facility and its

health centres. This will indicate the type of providers are providing care as this is linked to years in service and current evidence in care provision.

The demographic characteristics shows that participant's ages ranged from 25 to 68. While 42% (n=10) were less than 30 years old, 38% (n=9) were aged between 31 and 40years; 13% (n=3) between 51 and 60 and 4% (n=1) above 60 years (Table below).

For academic qualifications, Malawi School Certificate of Education (MSCE) was predominantly the highest level of education attended by most participants 92% (n=22) while 8% (n=2) had Junior Certificate of Education (JCE).

Professional qualifications reflected the academic qualifications as most participants 67% (n=16) were nurse midwife technicians with a college diploma; 8% (n=2) were nurse midwife technicians with a certificate in nursing and midwifery; 13% (n=3) were Enrolled midwives, which is a lower cadre than NMT, with certificate in nursing and midwifery; 8% (n=2) of the participants were registered nurse midwives with a degree in nursing and certificate in midwifery and 4% (n=1) were registered nurse midwife with diploma (Table below). One of the NMTs and one enrolled midwife had an additional certificate in community nursing.

According to the findings 75% (n=18) of the postnatal services were being provided by Nurse Midwife Technicians (NMT) and 12.5% (n=3) by enrolled nurse midwives. While registered nurse midwives provided 12.5 % (n=3) of the services. One of the three RNM was nurse in-charge for the district hospital while the rest provided bed side postnatal care in maternity ward and MCH department (Table below).

The years of experience working in postnatal department ranged from 8 months to 8 years with a mean of 5 years. 75% (n=18) had been providing postnatal care for 1 to 5years while 13% (n=3) had worked in the postnatal ward for less than a year and more than 5 years respectively (Table below).

Table indicating participants Demographic Characteristics

Characteristic	**Number**				
Age	**<30yrs**	**31-40yrs**	**41-50yrs**	**51-60yrs**	**>60yrs**
	10	09	01	03	01
Academic Qualification	**Malawi School Certificate of Examination (MSCE)**		**Junior Certificate of Examination (JCE)**		
	22		2		
Professional Qualification	**Degree in Nursing & Certificate in Midwifery (RNM)**	**Diploma in Nursing & Midwifery (RNM)**	**College Diploma in Nursing & Midwifery (NMT)**	**Certificate in Nursing & Midwifery (NMT)**	**Certificate in Nursing and Midwifery (ENM)**
	2	1	16	2	3
Department currently working	**Postnatal ward**	**Labour Ward**	**Maternal & Child Health**	**Maternity**	
	3	9	5	7	
Years worked in the department	**<1 Year**	**1-5 Years**	**>5 Years**		
	3	18	3		

The four themes developed from both the FGDs and IDIs were; knowledge of postnatal care; availability and use of PNC protocols / guidelines; factors perceived to promote delivery of postnatal care and hindrances to effective provision of postnatal care.

Knowledge of Post Natal Care (PNC)

Knowledge of PNC will be under the following areas: care giving, health education and counselling and importance of postnatal care. Additionally the source of information like books, online; how current the information is and how often is the knowledge updated using different fora like in service, workshops, reports, conferences and books would be noted.

When asked to describe PNC in general, fewer than half of the participants in FGD briefly described PNC as care provided to mothers and neonates after birth. Participants were not specific with the time period nor type of care provided . Fewer than half of the participants also described PNC as care provided to mothers only up to six weeks while a minority described it as care provided to the mothers only up to 28days after delivery. However, fewer than half of the participants managed to describe PNC as care provided to mothers and neonates up to 6 weeks. For example, one midwife technician said: "PNC is the care that is given to the mother and neonate after delivery up to 6 weeks which is 42 days" **participant 1, FGD 2.**

The results also indicated that majority of IDI participants describe postnatal care as care provided to both mothers and neonates so as to improve the health outcomes for both. However, minority described postnatal care as care provided to the mother only.

Care Giving

Most participants both FGD and IDIs described care given to women and neonates in terms of physical assessment and care provided on different time periods of one hour; 2 to 24 hours in hospital care; follow up care at one week and six weeks. However, a few participants said that care given to the mother is on-going and not only given at one week or six weeks after discharge from the hospital. One midwife technician said:

> It would happen that the mother is discharged and before one week she might come back with a danger sign so we have to attend to that danger sign. It is on-going process not only waiting for one week check-up but if mother comes with a problem then we have to assist, **Participant 3, FGD 3.**

Monitoring within 24 hours after birth

On physical examination of the mother within 24 hours after delivery, fewer than half of the participants mentioned checking vital signs while a minority mentioned assessment of uterus for involution, flow of lochia, bladder emptying and checking if the mother has excessive vaginal bleeding. A few participants also mentioned on checking breast milk establishment, perineal tears, general hygiene of the mother and checking the incision area for bleeding in women who delivered through caesarean section as described by one midwife that "for women who delivered through caesarean section we check the incision area if is not bleeding and if the dressing is intact" **participant 6, NMT, FGD 1.**

There was no specification on the intervals of checking the vital signs except for a few participants in the IDIs who said that the vital signs are checked at least every 12 hours. Most of the participants described blood pressure, temperature and pulse rate as the vital signs checked, none mentioned checking the respiration rate.

There was less mentioning on physical assessment done to neonates within 24 hours after birth compared to that done to women in both groups. A few mentioned checking how long it took for the neonate to breath; presence of reflexes or any deformity and if the neonate is able to pass urine or stools. Minority of the participants, who were mostly IDI participants, mentioned checking if the cord is well secured to prevent bleeding. "For the neonate, we monitor presence of reflex, if able to suckle or breastfeed, cord stumps for bleeding and vital signs like temperature" said one midwife technician, **Participant 2, IDI.**

Management within 24 hours

On care provided within 24 hours after delivery, about half of the participants mentioned cleaning of bed to promote comfort; promoting skin to skin to promote warmth to neonate as well as bonding between mother and neonate; provision of food for energy and perineal care which included suturing of tears and changing sanitary pads. A few providers however, mentioned providing insecticide treated nets (ITNs) and Paracetamol for after pains as described by one enrolled midwife that "when the mother has after pains, we give Paracetamol as analgesia. We also provide insecticide treated mosquito nets and if babies are enough, HSAs are told to immunize them" **Participant 6, IDI.**

Care provided to neonates included; applying tetracycline eye ointment (TEO) to neonate's eyes, warmth (warm clothes to prevent hypothermia), assisting attachment of baby to breast for breastfeeding, cord care and immunizations.

Monitoring and Management of Mother at One Week

Regarding physical examination of mothers at one week, fewer than half of the participants described assessing uterine contractility, smell and amount of lochia as some of the physical assessment done at one week postnatal check-up. Checking blood pressure, temperature and anaemia were also mentioned by minority of the participants. A few mentioned checking general hygiene; healing process for women who had tears; flow of breast milk; oedema; how the mother is responding to the environment and breastfeeding the baby.

Care provided to mothers at one week included supplementation of Vitamin A, administering Tetanus Toxoid Vaccine (TTV) and checking for haemoglobin (Hb) levels for women suspected to have anaemia. "We give other important drugs such as Vitamin a and cross checking on TTV immunizations, if the woman is due for TTV, we give the TTV" described one midwife technician (**Participant 6, FGD 3).** Another midwife added that "if the mother is anaemic, we take blood sample to check level of haemoglobin (Hb). If the Hb is low, the woman is referred for appropriate care" (**Participant 5, NMT, FGD 2).**

Monitoring and Management of Neonate at One Week

Checking breathing pattern; skin colour; healing of cord stump and if neonate is able to take Nevirapine in cases of HIV positive mothers ; pass stool or urine were mentioned by a few participants as assessments done to the neonate at one week postnatal check-up. Minority of the participants mentioned weighing, assessing breastfeeding pattern and care of the cord stump. "For the baby, we check the umbilical cord and ask how they take care of the cord. We also check if the baby is breast feeding, passing stool or urine" described one registered nurse midwife (**Participant 5, IDI**).

Monitoring and Management of Mother and Neonate at Six Weeks

Most participants did not mention any assessments done to the mother at six weeks except for a few who mentioned checking vital signs. However, minority of the participants mentioned provision of family planning method to the mother while fewer than half of the participants in IDIs said that mostly at six weeks, women are referred to outreach clinics run by health surveillance assistants (HSAs). "I just tell mothers that at 6 weeks, they should go to the nearest outreach clinic for the baby to get immunization and the mother to start family planning before the baby gets old" said one of the enrolled midwives" (**Participant 6, IDI).**

This suggests that most women are not assessed at six weeks which could be due to lack of knowledge on care of PN women at six weeks.

On care provided to the neonates at six weeks, minority mentioned administering immunization while a few participants mentioned checking the baby's weight, collecting Dry Blood Sampling (DBS) for HIV DNA test and providing Cotrimoxazole preventive therapy (CPT) for HIV exposed neonates. "Sometimes we have HIV positive mothers so we advise them to come after 6 weeks to collect DBS sample for the baby" said one midwife technician, **Participant 1 in FGD 3.**

Majority of the participants recognised that PNC is provided to both mothers and neonates, but only a few participants actually mentioned the care provided to neonate in hospital, at one week and six weeks postnatal check-ups. This suggest that postnatal care is mostly regarded as care given to women only.

Health Education and Counselling

Based on current evidence health promotion and education are very important components of PNC .The results of the study found that participants in both IDIs and FGD acknowledged the significance of health education during PNC. Most participants explained that health education provides health related information to mothers and their families. One registered midwife said:

> Information giving is very important because if you cannot give the information to the clients you cannot do everything to the client. At one point the clients will be discharged from the hospital and they are supposed to have adequate information on how they can care for themselves and their babies at home**, participant 4, IDI.**

In this case, the participant explained that the information given to clients help them to use the information as a guide in self-care when they are discharged from the hospital since midwives are not always with clients throughout the postnatal period. This is important as it promotes health postnatal care practices thereby promote health outcomes for both mother and neonate.

Common information mentioned by participants given to clients regarding maternal health through health education and counselling within 24 hours after delivery included self-care, general hygiene and feeling for uterine involution. Minority of the participants also mentioned advising the women on reporting back to nearest health facility at one and six weeks for check-up. Additionally the results indicate that mothers are informed of type of danger signs as well as to reporting any danger sign immediately to health workers. "Women are told the danger signs that may occur and are advised to report to the hospital if they have any danger signs without waiting for 7days" explained one midwife technicians**, participant 6, FGD 2.**

Resuming coitus and self-care were some of the information given to the mother by a few participants at six weeks postnatal check-up. Participants also talked of reminding HIV positive women to continue taking ARVs for life and counselling women on how to wean babies at 6 months. "At six weeks and on, the baby continues with breastfeeding so we advise the mother to continue with exclusive breastfeeding (EBF). This is also the time we teach the mother on how to wean the bay at six months" **participant 1 (NMT), FGD 2.**

The results indicate that for neonate, the information given included safety of the neonate at home, attaching baby to breast; danger signs for neonate and early reporting of any danger signs.

> While in the ward, this is the time a midwife stays with mother and teaches her on how to take care of the neonate, how to protect the baby and observe any danger signs for both so that she can alert the midwife on any danger signs noted**, participant 6 (NMT), FGD 2.**

At one and six weeks, participants explained that for the neonates information centred on continuation of immunization, exclusive breastfeeding and dry blood sampling (DBS) to test for DNAPCR in HIV exposed babies. "Sometimes we have HIV positive mothers so we advise them to come after six weeks to collect DBS sample for the baby" said one nurse midwife technician, **participant 2, FGD 3**.

Much as health education was included in the PNC provided, majority of the participants indicated that health education and counselling is given to the mother without including significant others like spouse/husband and or family members. A few participants said that women are advised to tell significant others on certain danger signs such as convulsions because of cultural aspects associated with convulsions. This is what one midwife technician said with regard to advising significant others on convulsions:

> Mothers are advised to tell family members that a convulsion in the postnatal period is one of the danger signs so that people are aware since during convulsions they may not be able to speak. Women are told to tell family

members not to consider convulsions as "*mizimu*" but should immediately take the woman to the hospital" **participant 1 (NMT), IDI.**

This means that spouse and or other family members who accompany mothers during delivery and most of the times provide care for the mother and neonate in the community are not given any health information which would help to give appropriate postnatal care at home.

Importance of Postnatal Care

When asked on importance of PNC, majority of the participants described PNC as important because it helped identify problems for the mother such as puerperal sepsis. One participant who was an NMT said:

> For example, if a woman has high temperature of 37.5^0c and above and also having offensive lochia could be sepsis and yet the mother may not know. In such cases the mother is given Gentamycin and Crystalline Penicillin. Of course we are supposed to give triple therapy for such cases but one drug (Chloramphenicol) is not available at the health centre **participant 1, (NMT), IDI.**

A few participants said that through examining the mother and neonate, complications which are seen as normal or perceived normal by the community like eye discharge are identified as one enrolled midwife indicated that:

> We also identify pus eye discharge in neonates. Most of the times the community believes that eye discharge come due to intake of pepper by the mother but yet it is a health problem. Eye discharge in neonates could

> be due to sexually transmitted infection so we treat the couple and the neonate as well **participant 4 (EN), FGD 1.**

Besides identifying problems or complications, the study found that midwives do recognise that PNC prevents occurrence of health complications for both mother and neonate.

> PNC is important because it can help us prevent some problems. For example during examination you may find that the woman is anaemic so if examination is not done, a woman can be discharged without knowing if she has anaemia.. Therefore, if postnatal care is to be provided comprehensively, such problems can be avoided for both mother and neonate, **participant 5, FGD (NMT).**

Much as the participants said PNC helped them identify complications, there were a few mentioning examples of neonatal complications than that of the woman which links with how a few providers described that the care provided was for both.

A few participants also described that the health education given is important for prim Para and women who have not had hospital deliveries before. One registered nurse midwife said:

> I also feel that PNC is important especially for first time mother. They do not know much about motherhood so if we explain properly, some are able to follow. Also some women may not have experienced hospital delivery so when they

come to the hospital and we educate them, they understand so, PNC is good **participant 1 (RNM), FGD1.**

Source of Knowledge

When asked on the source of knowledge for midwifery practice; fewer than half of the participants in FGD said that they use Safe Motherhood protocols and procedure manuals or books in form of BEMONC procedure manuals or pamphlets while minority mentioned knowledge gained from midwifery training schools; colleagues and in-service trainings on Prevention of Mother to child transmission of HIV (PMTCT) and HIV Testing and Counselling (HTC). A few mentioned of information sourced through the internet.

Among all sources of information, the study results found that protocols were the most common and reliable source of information because they are accepted by authorities and have current information as indicated by majority of the participants that: "since things keep changing each day so the protocols have current information which could be different from what we learnt in training schools**" participant 1, FGD 3 (NMT).**

Minority said that knowledge gained through midwifery training was also reliable. However, some said that most of the times midwives fail to implement what was learnt in school due to inadequate human and material resources as described by one midwife that:

In terms of the care given, what we do on the ground and what we learnt at school is quite different especially because of lack of resources. The other reason could

be because we have a lot of postnatal women to be assessed and a few providers. So if we are to consider what we learn in school, routinely every woman is supposed to be assessed thoroughly, do full physical examination but you find that there are a lot of women so most things are done through short cuts **participant 5, FGD2 (NMT).**

A few participants mentioned that they also rely on guidelines (protocols) pasted on walls because they are research based and easily accessible to everyone as well as current research findings shared by colleagues from training institutions and Voluntary Service Overseas(VSO) personnel hence cannot rely on knowledge gained from school only. A midwife technician commented that: "most of the times the posters that we have, which are guidelines, are research based and accepted by authorities that they can be used" **participant 6, FGD 2.**

Protocols on postnatal check-up of the mother after delivery; postnatal complications and management and care of the neonate were mentioned by majority of the participants as being present at NDH. Some of the guidelines are on exclusive breast feeding; general nutrition; PMTCT and hospital protocols on infection prevention.

Despite presence of protocols on postnatal care in the postnatal ward, the study results showed that the MCH department where one week and six weeks postnatal check-ups are done had no single protocol of postnatal care. Providers relied on previous knowledge gained from training schools. "We do not have protocols or guidelines pasted regarding postnatal care in our department. We use knowledge gained from training schools" said one midwife technician, **participant 2, FGD1**

The findings also indicate that there is little knowledge gained from in service trainings which offer current information on various aspects of postnatal care. This is due to lack of in service training regarding postnatal care. Additionally, there was no mention of use of personal experience in providing care which is also important in internalisation of knowledge and skills.

Availability and Use of PNC Protocols /Guideline

One sub theme, impact of protocols on care provided, emerged from this theme.

Type of Protocols and Guidelines and their Impact on Care Provided

Besides being used as a source of knowledge participants said that protocols helped with health education especially on danger signs during the postnatal period; demonstration of breast feeding positions and nutrition. One midwife said: "For example, when giving health education, the guideline on nutrition indicates all the six food group so we show the mothers the different kinds of food group in reference to the pictures drawn on each food group**" participant 1, FGD3.**

What was clear from the findings was that protocols help midwives to provide care that is uniform and systematic and assist in identification and management of complications. This is reinforced when pasted on walls, as they provide easy access to information unlike books or manuals. However, inadequate space in the postnatal ward proved to be a hindrance in implementation of what is stipulated in the guidelines as two midwives technicians at NDH explained:

> The guidelines have a positive impact on practice because when we use them they help us to rule out the danger signs and how to manage them for example, sub involution of the uterus. If the woman has sub involution of the uterus then you have the guidelines on how to manage, for example, emptying of bladder so protocols are having a good impact on practice **participant 3, FGD2.**

Another midwife technician commented that:

> The guidelines are user friendly but due to issues with environment and other challenges, we fail to follow what the protocols say. For example, a woman with Puerperal sepsis is supposed to be isolated but sometimes we have other women who are waiting for establishment of labour in isolation room so we end up putting the mother in the ward, just at the corner, **participant 6, FGD2.**

Factors Perceived to Promote Delivery of PNC

For midwives to provide comprehensive care there is need to have adequate resources such as providers with a positive attitude; physical environment, equipment and supplies including protocols /guidelines. Adequate number of providers, availability of resources and physical environment were the three sub-themes identified under factors that promote delivery of postnatal care.

Adequate Number of Providers

The results indicate that having enough providers at each shift in the postnatal ward would enhance comprehensive care to mothers and neonates, which most of the times is omitted. This is because while some midwives will manage normal cases the

other would be managing complicated cases. Such comments were evident both at district as well as health centres and both FGDs and IDIs. Unlike having one midwife working day and night as it is the situation at the moment at health centres. Adequate number of providers was considered as a major factor to failure of midwives to provide comprehensive postnatal care**.** For health centres, inadequate number of providers, contributed to having hospital attendants to do the midwife's duties such as checking vital signs.

A registered midwife lamented: "if we could have at least three or four midwives per shift, provision of PNC can be comprehensive" **participant 5, IDI** and **participant 6, IDI (**Enrolled Nurse Midwife) added that:

> If we had 3 midwives, one midwife would be on day duty, the other on night duty while one is resting on day off. Since we do not have enough midwives, we consider that at least one should rest for a week. That is why one midwife is on duty day and night for the whole week.

Besides having enough midwives, a few participants in FGD also explained the importance of having clinicians allocated to postnatal ward to oversee complicated cases in time. One midwife said:

> Despite allocating enough midwives, the PNW should also have one or two clinicians' specific for PNW. This is because we have a lot of work in PNW compared to labour ward. If we have conditions in PNW, the care is compromised, and a clinician only comes once in the morning then gets busy with

labour ward or may be operative deliveries or sometimes goes to provide care in other departments as a result midwives struggle to provide care where there is need for a clinician to assist **participant 6 (NMT), FGD 2.**

Availability of Resources

When participants were asked on what could promote postnatal care, majority of the participants both IDI and FGD indicated that availability of basic drugs, supplies and equipment like gloves, sphygmomanometer, thermometers and weighing scale. Majority of the participants however said their departments had no sphygmomanometers, thermometers antibiotics as well as examination couches which hindered comprehensive care.

"If a sphygmomanometer (B/P) machine is in good condition the thermometer is working well and if we have the mosquito nets and Vitamin A, it helps us deliver good services to mothers and neonates" said one midwife technician, **participant 7, IDI.**

"Sometimes women develop sepsis if we cannot have intravenous Metronidazole then we cannot even give comprehensive treatment to treat puerperal sepsis" a registered nurse midwife said (**participant 4, IDI**).

Physical Environment

Apart from the human, equipment, drugs and supplies physical environment with adequate space is vital for provision of any care and postnatal care in particular as one midwife who is experiencing the effects of such at his facility proudly indicated; "we

have a spacious postnatal room, this helps because every woman is given a bed for comfort after delivery" p**articipant 7, IDI (NMT).** However, another midwife said:

> At the moment, there has been an extension of the structure at our facility and we have a postnatal ward. Therefore, we are able to observe/care for mothers for 48 hours although not all women are kept for 48 hours especially when we have more deliveries in a day, for example 10 deliveries, the space still is inadequate unless if deliveries are 5 or less, **participant 2, IDI (NMT).**

Hindrances to Effective Provision of Postnatal Care

The study found out that institutional, individual and community factors contribute to midwives failure to provide comprehensive PNC. The study findings also indicate that institutional factors have an influence on individual midwives attitude towards postnatal care in the sense that the providers have a negative attitude towards PNC attributed to lack of resources and workload due to shortage of staff.

Individual Factors

Individual factors are attributes of individual care provider that affect delivery of care. Experience, knowledge, type of midwifery training and attitude are some of the individual factors that may positively or negatively affect delivery of care. In this study, majority of the participants described negative attitude of midwives as the major contributing factor to failure to provide comprehensive postnatal care.

Most participants explained that they fail to do thorough examination of the woman and neonate in the postnatal ward and upon discharge from the hospital due to work load attributed to shortage of staff. One midwife technician said:

> Sometimes we fail to provide comprehensive care due to too much work. For example, on discharge, we are supposed to conduct head to toe examination on every woman which we fail to do if there are a lot of women. When the woman says that the perineum is intact, we just document instead of actually checking for flow of lochia or do the vaginal examination as expected. We just provide some of the care but proper assessment is not done due to pressure of work (**participant 6, FGD3).**

In some cases, midwives indicated that detailed health education is not given because midwives get tired especially in health centres where one midwife works during the day and night. "When you get tired, health education is done in short cuts as well. Mostly I talk briefly instead of explaining on how women should take care of themselves and their neonates**", participant 6, IDI (ENM).**

Midwives failure to provide comprehensive care could lead to women and neonate developing complications just as a few participants noted that omitting some care, for example demonstration of cord care, could lead to neonates developing sepsis. One midwife said:

> According to the guidelines upon discharge, we are supposed to teach the mother on cord care but mostly cord care management is only said on general health talk

> without demonstrating which I think it is a challenge especially to first time mothers. May be for Para 2 and above they may have an experience unlike first time mother who could be sixteen years and sometimes may not have support from parents. End result, they are coming with sepsis **participant 5, IDI (RNM).**

Lack of knowledge and skills, was also identified by almost half of the participants as contributing factors to midwives having a negative attitude towards postnatal care. "Sometimes when you do not have a skill to perform a certain procedure you tend to have an attitude, for example, a midwife may say the patient does not want to be sutured when in actual sense you do not know how to do it" explained one registered nurse midwife**, participant 4, IDI.**

Besides work load, lack of knowledge and skills, a few providers indicated that some midwives just have a negative attitude for unexplained reasons and some midwives feel that women who have had uneventful delivery need not much attention compared to those in labour ward. Lack of support in terms of supervision of care provided, lack of appraisal in performance and sending the very same providers for trainings were also identified as contributing factors to reduce motivation which lead to midwives' negative attitude towards postnatal care. This is what one midwife technician described regarding training opportunities:

> There is need to rotate providers going for the trainings. For example, you may stay in the ward for years and some providers are sent for trainings every time there is one yet some are not sent. That makes the provider who is left to be less motivated to work **participant 6, FGD 3.**

Participants in both IDIs and FGD expressed that a positive attitude by providers would help in provision of effective care. Commitment and interest of midwives; knowledge through trainings; team work; good interpersonal relationship among providers; supervision and performance appraisal were identified by majority of the participants as some of the factors that would help midwives have a positive attitude towards PNC.

Another area of interest the results found was interpersonal relationship and team work among different cadres of providers and among midwives in particular on one hand and with clients and patients on the other. The results indicates that good rapport among providers and that with clients and patients encourage and boosts morale of providers; while clients and patients will have trust in their providers and be willing to come for services as explained by one midwife technician:

> Good rapport between working staff and patients facilitate provision of effective care. If women are not received well at the facility and go home without getting any health education they cannot be interested to come back to the facility because they know they will not benefit. However, with the few available resource, we try to give the women full information on discharge so that when they take care of themselves and their babies at home they should not develop complications as a result women come back for postnatal care which promote postnatal care. **Participant 2, FGD2**

Institutional Factors

Majority of the participants in IDIs and FGD said that they failed to provide comprehensive care which included head to toe examination of the mother and neonate as well as detailed health education, due to inadequate human and material resources. About half of the midwives in IDIs described that circumstances such as trainings contribute to more shortage of providers while a few participants further said that sometimes postnatal check-ups are postponed due to shortage of staff. A nurse midwife technician in one of the health centres said:

> Shortage of staff sometimes hinders provision of postnatal care. For example some providers have gone for trainings/workshops and when women come for postnatal care follow up they are not seen because the midwife is busy. Women are sent back home and given another date for postnatal check-up **participant 1, IDI**.

Furthermore, a few participants said that sometimes one midwife provide services to maternity and outpatient department (OPD) and this leads to assigning hospital attendants (non-midwife personnel) to provide the PNC. As a result, the care provided is compromised as described by one midwife technician:

> For example, we are two providers at the facility that means one provider goes on day shift and the other on night shift. The one who is on day shift is responsible for providing care in the maternity unit as well as OPD, ART clinic so most of the times it is hard. For example you may have an assault patient in OPD at the same

time there is a woman in labour and there are postnatal women who need to be examined before discharged. In such cases, we just instruct the hospital attendant to discharge the mothers. As such, women go home without being given important information such as family planning and others. Sometimes on the day of one week check-up the midwife might also be busy **participant 3, IDI.**

Majority of the participants in FGD and IDIs said that lack of gloves; sphygmomanometer; thermometers, baby weighing scales; drugs like vitamin A and other antibiotics contribute to failure of the midwives to provide comprehensive care.

Most of the times we fail to identify some of the health problems that could have been found if we did thorough examination. For example if you want to check if the woman has fever and there is no thermometer, we try to feel using a hand but it is not as effective as checking with a thermometer. Most of the times we do not have BP machine so we do not check BP in women and we just let them go without knowing if they have high blood pressure or not, **participant4, FGD 1 (ENM).**

The study findings revealed that in some of the paying facilities, midwives fail to provide comprehensive care because clients cannot manage to pay for the services. For example:

If the woman has PPH we know that for proper resuscitation may be the woman needs 2 litres of normal saline to prevent shock but we just give 1 litre or 500mls to reduce the cost. We most of the times do this considering the experiences that I

have whereby clients are kept in the ward until they settle the bill so as care givers we are limited to provide the appropriate care to prevent such circumstances. Said one of the nurse midwife technicians (**participant 3, IDI).**

Lack of proper infrastructure for provision of postnatal care was also identified as one barrier to provision of comprehensive postnatal care in most of the health centres and the district hospital. Lack of infrastructure also hindered provision of postnatal care at outreach clinics. The study revealed that most of the times women are discharged within 24 hours and in some cases after 12 hours due to inadequate space to accommodate the women and neonates. Midwives explained that inadequate space contributed to lack of privacy during individual counselling and examination. Furthermore, the study findings also indicate that due to inadequate space, safety of mothers and neonate is at risk as described by a midwife technician that: "the environment is not safe for the mothers because sometimes we have two or more mothers on one bed or mothers who have medical conditions such as cough, on the same bed. That compromises the care that we render" **participant 6, FGD 2 (NMT).**

It was noted that when midwives tried to keep women and neonates for 48 hours as recommended, there was an increase in postpartum infection for both mothers and neonates. This was because two or more women were sharing the same bed space.

Community Factors

Individual Women's Attitude

Attitude of some mothers was identified as a contribution to failure to provide comprehensive care. About half of the participants in FGD and IDI said that much as health education is given to the mother on follow up care, women do not report for the services due to laziness and negligence. Participants indicated that most of the times women do not perceive the importance of going back for check-ups after uneventful delivery. This is possible in cases where the facility is far from the community and mothers or family members cannot afford transport.

> I think most women are just lazy to come after 7 days especially if they do not have any health problem they think it is not necessary to come for check-ups. Some women who develop complications and mostly Prim Para are the ones that come at 7 days, p**articipant 2, IDI (NMT).**

Cultural practices

Besides individual attitude of women, some cultural practices such as delaying coitus and not allowing neonate to take colostrum were also identified as hindrances to providing effective care especially health education as explained by one midwife technician that:

> For example on resuming of coitus, we tell the women to resume coitus and start family planning after six weeks whilst in the community they are told to wait up to 6 months so when you are telling the women, they get surprised or some even

say that it cannot be possible so that clearly shows that they will not do what they are being told and that prevents delivery of comprehensive care, **participant 5, FGD3.**

This means that when women are discharged from hospital, they will be likely to implement information given by community members other than that given by midwives which could have been clarified if significant others were involved in health education and counselling sessions.

Community's knowledge on PNC

However, a few participants in FGD argued that some women and the community are not aware of the importance of PNC care because midwives do not emphasize much on importance of PNC compared to other maternal health services. "Midwives do not emphasize on importance of postnatal care and complications that may occur if postnatal care is not provided to the mother and neonate so that the community realises that postnatal care is as important as the antenatal period" **participant 2, FGD 1 (ENM).**

A few participants said that sometimes community leaders are involved in maternal and new born health review meeting but the meetings do not specifically focus on postnatal care issues. Midwives also indicated that when there are issues on peculiar cultural believes that contribute to health risks of the mother or neonate, follow up is made with specific communities. A few midwives also indicated that some partners that work in the district on issues of maternal and new born health do not do activities on

postnatal care. This could mean that the community has less information on PNC which may contribute to less interest to turn up for PNC check-ups.

Suggested Changes to Improve Delivery of Comprehensive Postnatal Care

Participants suggested a number of strategies that would assist to improve PNC. Some of these were; increasing number of providers to 4 midwives per shift in the postnatal unit and at least three midwives per health centre. NDH participants suggested constructing a standalone infrastructure as postnatal ward with its own equipment, midwives including a ward clinician to improve management of postnatal clients at the district hospital. In some health centres, refurbishment to include a separate postnatal unit was suggested

Having frequent in-service trainings and continued professional development (CPD) sessions on PNC was another strategy mention to improve delivery of appropriate postnatal care. Some participants also suggested having protocols on head to toe examination of the neonate as these were not available in some facilities. Participants also suggested increasing locum for maternity ward to encourage midwives to work on locum basis and increasing health centre allowance to promote providers' motivation.

As a way of improving knowledge and attitude of community towards PNC, participants suggested promoting linkage between health workers and the community through orientation of local leaders, community awareness campaigns on postnatal care and working in collaboration with community health providers such as Health Surveillance Assistants (HSAs). There was also a suggestion to devise different ways of

disseminating information postnatal care such as use of video tapes or drama on PNC issues.

Summary

The study has revealed that postnatal care is provided to mothers and neonates within 24 hours of delivery; at one week and 6weeks. It includes physical assessment, management of postnatal mother and neonate and health education.

Care given at six weeks mainly focuses on immunization of babies and family planning for the mother. The health education included danger signs for mother and neonate, and reporting to nearest facility when complications occur; self-care and how to take care of the neonate at home.

One significant finding was that the care, health education is provided to the mothers alone during most of the postnatal period.

Availability of human and material resources; infrastructure for PNC and a positive attitude of providers were considered to promote delivery of comprehensive PNC. However, most of the facilities had inadequate resources as well as space for PNC which contributed to providers' failure to provide comprehensive care. The result being that midwives were unable to provide thorough physical examination as well as comprehensive care. Community's lack of knowledge on PNC and some cultural practices contributed to midwives failure to provide comprehensive PNC as sometimes women do not turn up for postnatal check-ups. In some cases, women preferred to practice what tradition demands contrary to information given by midwives.

Midwives suggested an increase in number of providers; availability of resources; supportive supervision and refurbishment of postnatal wards so as to improve delivery of comprehensive care. Community awareness of postnatal care through campaigns, linkage with local leaders and community health workers was also indicated as one way of improving community's participation in postnatal care.

Chapter 5

Discussion

Introduction

This section presents discussion of the study results in relation to the objectives of the study. The study aimed at assessing midwives' knowledge of PNC; review availability and utilization of PNC guidelines/protocols and examines factors that influence delivery of post natal care. The chapter presents relationship of the study findings to the literature. Implications of study findings to midwifery practice, recommendations, limitation and conclusions drawn from findings have been included.

Demographic Characteristics

The results show that 42% were less than 30 years while 38% were below 40 years and 17% were above 50 years. This indicate that majority of the services are provided by young midwives. Middle aged midwives possess up to date information and are proactive with evidence based practices which is good for implementation of comprehensive postnatal care.

The study revealed that 67% of postnatal services are provided by NMT with college diploma in nursing and midwifery while 12 .5% were being provided by RNM with a degree. Postnatal care services were being provided by midwives of all cadres. The mix in cadres is important for comprehensive delivery of PNC as NMT will be referring to RNM especially on difficult cases. However, only 8% of the RNM were practicing at the district hospital which shows that there is inadequate skills mix. Similar findings in Malawi have been reported by Chintembo et al. (2013). Ntcheu district

hospital needs to have more RNM to plan, implement and evaluate maternal and new born care as well as supervise the enrolled and midwife technician. In health centres where RNMs are not available, there is need for the nurse managers to provide mentorship to NMTs and ENMs in order to promote delivery of comprehensive postnatal care.

Results show that the highest level of education was MSCE in 92% of the providers while 8% had Junior Certificate of education. National Statistical Office and ICF Macro (2005) says that educational level is important because it improves the decision making hence preventing the third delay of the three delays which is delay to receive appropriate treatment. This concurs with WHO, UNFPA, UNICEF & World Bank (2012) that all women and new born should have skilled personnel during pregnancy, child birth and immediate postpartum period in order to achieve MDG 4 and 5. Furthermore, MSCE is a prerequisite for upgrading to higher level of education. This suggests that the 90% of the NMT with MSCE are capable of upgrading to registered nurse midwife. Midwives, therefore, should be given more opportunities for continuing education so as to provide high level postnatal care.

The study results also indicate that the mean years of experience was five with 75% of the respondents having provided PNC between one to five years. This demonstrates that postnatal services were mostly provided by novices. Less experienced midwives could have a negative effect in management of postnatal clients.

Relationship between Demographic Data and Knowledge of PNC

Knowledge with regard to PNC provided was the same among all midwives of different cadres. This is a positive development as it shows that all midwives regardless of cadre are able to provide appropriate PNC to mothers and neonates. Notable difference however was observed between the RNM and other cadres in terms of rationales given for the care provided to mothers and neonates. This is expected due to nature of RNM training and expected skills at their level.

Study results indicate that though most midwives have worked in the postnatal ward for a mean period of 5 years, they did not have in-service education regarding PNC. This shows that most midwives have been practicing without updating new knowledge through in-service trainings. In Pakistan, a study done amongst paediatric nurses showed that there was knowledge gap among young paediatrician most of whom had qualified with 6 months to 2 years in practice which necessitated the need for in-service training for midwives of all age ranges (Essani & Ali, 2011). There is need to upgrade midwives knowledge through in-service training so that midwives are able to provide up to date care to mothers and neonates.

Furthermore, the study revealed that 33% of the RNM were knowledgeable regarding current use of Implanon as a method of family planning initiated at three weeks after delivery. This suggests that one cadre of midwifery providers may be receiving in-service training compared to the other. All midwives need to be given opportunities for in-service training to provide optimal PNC. Continuing professional development in PNC is therefore essential to improving midwives knowledge.

In this study, all midwives displayed same level of knowledge regardless of years of experience. This supports findings on midwives not indicating use of past experience as source of knowledge for midwifery practice. This may imply that much as providers have stayed in the postnatal department for several years, midwives were not translating knowledge into practice. Similar findings were reported in a study that assessed new born care provided within one hour by Mwale, Chirwa and Maluwa (2013). Midwives need to put into practice the midwifery knowledge on PNC acquired through training in order to promote health of mother and neonate.

Midwives Knowledge of Postnatal Care

Postnatal Care for the Mother

Assessment

Midwifery care in the postpartum promotes the process of involution and provides emotional support. The care also prevents postpartum complications and it assists in establishing successful lactation as it promotes responsible parenthood (Simbar et al., 2005). This study indicates that midwives demonstrated knowledge on assessment of the mother from one hour after delivery until discharged from hospital. Midwives mostly stated that they assess blood pressure; temperature; pulse; uterine contractility; flow of lochia; excessive vaginal bleeding; breast milk establishment and checking bladder for emptiness. The findings are in line with the national guidelines on assessment of postnatal woman in the hospital. This is a good development as it implies that midwives are able to assess most of the physical changes in the first 24 hours after delivery which is the period when most of the postpartum complications occur (Sines et al., 2007). Similar

findings were reported by Kebalepile and Sundby (2006) who found that in Botswana, majority of the midwives had good knowledge of PNC and more than two thirds were able to do a vaginal inspection to assess flow of lochia; check for uterine involution; examine breasts and measure blood pressure.

The study findings also indicate that midwives were aware of most areas of assessment at one week postnatal check-up which included uterine contractility; smell and amount of lochia; blood pressure; temperature; anaemia; healing of perineal tears; flow of breast milk; oedema; general hygiene and lactation. Knowledge on assessment of the physical changes in women is important as it implies that midwives will be able to identify any abnormal changes and provide appropriate care.

Midwives knowledge of complications such as haemorrhage in the early postpartum period which is greater than 30% in Asia and Africa (Khan, Wojdlya & Say, 2006) is important in prevention of maternal mortality due to PPH. In Malawi, PPH accounts for 14% of all maternal deaths (MOH, 2009) hence assessment of flow and amount of vaginal bleeding helps in early identification and management of PPH. However, midwives mostly mentioned amount and flow of lochia disregarding consistency. Consistency of lochia helps in identifying if mother has returned products of conception which can lead to secondary PPH due to sub involution. Returned products of conception can also lead to development of puerperal sepsis which is a second leading cause of maternal death in Malawi at 19% (MOH, 2009).

Assessing for anaemia is important since there is inevitably some loss of blood during labour which put women at risk of developing anaemia. In support of this, a cross

section study on the magnitude of and prevalence of anaemia among 349 mothers, who had delivered within 12 months, attending child clinics in Tororo district of Eastern Uganda found that two thirds (64.4%) of women were anaemic (De Clercgy, Sakala, Carry, & Applebaum, 2008). It was found that 15.8% of anaemic women suffered from moderate to severe anaemia (Hb10.0g/dl-7.0g/dl) due to excessive bleeding (during delivery and days that followed) while 48.6% had moderate anaemia due to lack of iron supplementation (De Clercgy et al., 2008). The study findings however indicate that midwives only provide iron supplementation in women identified to be anaemic. This is contrary to WHO (2013) guidelines which indicate that routinely, all women in the postpartum period should be given iron and folic acid supplements for 3 months to prevent development of anaemia. Considering that 37.5% of pregnant women in Malawi have anaemia (Hb <10.0g/dl) during pregnancy (National Statistical Office & ICF Macro, 2011), there is need to provide iron and folic acid supplement in all postnatal women. Midwives therefore need to be aware of all guidelines with regard to PNC so as to provide evidence based care all the time.

In this study, it was established that a few midwives had knowledge on assessment of the mother at 6 weeks which only included checking temperature, blood pressure and assessing nutritional status. These findings demonstrate that midwives do not conduct physical assessment of the women to ascertain if the woman has returned to pre- pregnant state or if there are any existing complications that need appropriate management. Limited information of midwives on PNC at six weeks may lead to lack of confidence in provision of care as well as disregard the importance of PNC to mother and neonate at six weeks postnatal check-up. Midwives need to have adequate knowledge on

care provided to women at all time periods so as to provide appropriate care throughout the postnatal period.

The study results also revealed gaps in knowledge with regard to assessing fundal height and breast conditions. Fundal height assessment helps to determine if involution is taking place. Assessing for breast conditions also help in management of causes to promote good health for the mother and neonate. Some breast condition such as cracked nipples or sores also help in identifying risk of HIV transmission to neonate in women with a Sero positive status.

Management

Study findings indicate that midwives were able to mention some of the recommended care provided to women within 24 hours after birth which included food for energy, hygiene and providing Paracetamol for after pains. Vitamin A supplementation and psychological support were not mentioned.

Vitamin A supplementation increases resistance to infection in neonates hence the need to provide it early after delivery (WHO, 2006). In this study, a few midwives indicated that they supplement Vitamin A at one week postnatal follow up. This implies that midwives do not provide Vitamin A to women immediately after delivery.

Malawi being one country highly affected by malaria, one way of preventing is providing insecticide treated nets (ITNs). The study revealed that midwives provided ITNs to women in the postnatal period. This is important as it helps in reducing incidences of malaria in the postnatal period. Provision of ITNs in the postnatal period

tally with national malaria control program and WHO guidelines which indicate that in malaria endemic areas, mothers and babies should sleep under insecticide treated nets (MOH, 2004; WHO, 2013).

Most midwives mentioned providing family planning services at six weeks. This is in line with MOH and WHO recommendation for family planning services which indicate that the recommended time for mothers to start using family planning is 6 weeks after delivery (WHO, 2006; MOH, 2009). A few midwives mentioned that Implanon can also be provided within 3 weeks after birth. However, midwives did not indicate provision of family planning services to women within three weeks after birth. There is need for all midwives to be knowledgeable with current information so that they are able to provide evidence based care.

Study findings also indicate that women are given Tetanus Toxoid Vaccine if on schedule. This is in line with national guidelines which indicate that TTV should continue to be given thorough the postnatal period as scheduled (MOH, 2009). Providing TTV helps to boost immunity against tetanus for subsequent pregnancies.

Assessment of emotional concern and support is also crucial in the postnatal period since women are adapting to the postpartum changes that may affect their well-being. This is contrary to the study findings as midwives did not mention assessment of emotional concerns in women except for a few who mentioned of it during the hospital stay. Study findings also indicate that midwives did not mention emotional care or assessment for emotional support for the women. Emotional care may improve well-being, reduce stress and depressive symptoms as well as enhance health maternal

outcomes (Isik & Bilgilli, 2010). Studies done to investigate incidence and impact of depression and anxiety symptoms on maternal bonding to the infant 2-3 months postpartum in Bangladesh showed that 50% of women reported depressive and anxiety symptoms with a third of them reporting bonding disturbances (Edhborg, Nasreen & Kabur, 2011). Similarly, a phenomenological study done on a group of Chinese women diagnosed with postnatal depression in Hong Kong showed that women had symptoms of depression after labour and delivery but did not seek help until depression was diagnosed by screening tests (Chan, Levy, Chung & Lee, 2002). The results suggest that screening for signs of depression in postpartum women may help to provide timely intervention and emotional support for the women and their families.

Postnatal care for the neonate

Assessment

Postnatal care for the neonate provides opportunities to check the neonate condition, identify any abnormalities and adaptation to extra uterine life. It also provides an opportunity to give support to breastfeeding and enables health workers to detect and manage any problems early (WHO, 2006).The study results showed that assessment done to neonate while in hospital from one hour of delivery is similar to recommended national guidelines. Majority of the midwives mentioned assessing presence of deformity; if neonate is able to pass stools or urinate; presence of reflexes; checking temperature; umbilical cord for any bleeding; weight and if neonate is able to breastfeed. However, midwives did not mention assessing respiratory and heart rates which are very crucial in neonate as they help identify if there is respiratory distress thereby provide timely

management. Midwives also lacked knowledge on assessing colour of skin and eyes which helps in early identification of jaundice and assessment of bulging fontanel which indicates presence of infection (MOH, 2009).

Study findings indicate that majority of midwives were knowledgeable on areas that need assessment at one week postnatal follow up. Areas of assessment mentioned were skin colour, breathing pattern; cord stump healing and care; breastfeeding pattern; weight; temperature; presence of pustules and ability to pass urine and stools. This implies that midwives are able to assess most of the crucial areas in neonates at one week postnatal follow up. Thorough assessment of neonates helps in early identification of complication which leads to timely management thereby improving health outcome.

Similar to findings of assessment of the mother at six weeks, study results indicate that a few midwives only assessed weight of neonate at six weeks. This implies that midwives lacked knowledge on areas of assessments in neonates at six weeks postnatal check-up. Lack of knowledge may imply that neonates are not assessed at six weeks to ascertain their health status before referred to under-five clinics for growth monitoring. Similar findings were noted by Warren et al. (2009) post intervention of introducing new PNC package in four facilities of Embu district in Kenya. Providers were more likely to ask mothers on new born health and feeding problems at 48 hours and about half asked at one week while less than half of the providers asked if neonates had fever, breathing problems at six weeks.

Management

Findings of the study indicate that majority of the midwives have knowledge on management of the neonate while in hospital especially on initiating breastfeeding, maintain clear airway; promoting bonding; warmth; cord care; providing Tetracycline eye ointment (TEO), immunizations and Nevirapine syrup for HIV exposed neonates. This has also been found by Kebalepile and Sundby (2006) in Northern Botswana, where it was noted that majority of the midwives have good knowledge in prevention of hypothermia and promoting bonding-in. Study results also indicate that midwives mentioned providing immunization and CPT at one week and six weeks postnatal follow up.

World Health Organization guidelines (WHO, 2013) indicate that the umbilical cord should be examined and cleaned daily. The umbilical cord puts neonates at risk of infection if not cared for since it is colonised by bacteria from environment sources such as mother's vagina, skin flora and hands of care givers(WHO, 2004; AWHON, 2007). Infection mainly after the first week of life contributes to 38% of maternal deaths in Sub Saharan Africa (Warren et al., 2008). Midwifery knowledge on cord care therefore reduces risk of infection which is a leading cause of neonatal mortality in Malawi at 30% (MOH, 2009).

National and WHO guidelines indicate that exclusive breast feeding should be encouraged in all neonates (WHO, 2006; MOH, 2009). Study findings shows that majority of the midwives were knowledgeable on breast feeding as a core care provided to neonate. Initiating breast feeding and assessing breast feeding was mentioned by

midwives throughout the postnatal contact period with neonates. Early initiation of breastfeeding increases the likelihood of sustained breast feeding and reduces the risk of infection related diseases (Edmond, Kirkwood, Amenga-Etego, Owusu-Agyei & Hurt, 2007) Knowledge of midwives in EBF helps to promote good health in neonates as breast milk is crucial for growth and development. Providing information and supporting women with breast feeding early is also important considering that only 30% of babies less than 6 months of age in sub-Saharan Africa are exclusively breastfed and only about 42% begin breastfeeding within one hour of birth (Warren et al., 2008). There is need for all practicing midwives to have good knowledge regarding care of the neonate so as to provide comprehensive care thereby promote health outcomes.

The study findings revealed that midwives only assess neonates once on discharge while in the postnatal ward, contrary to national guidelines which indicate that neonates should be assessed at least every twelve hours (MOH, 2009). In Cameroon, a descriptive study targeting postpartum clients to assess patients satisfaction with the care provided showed that among 23% of clients who said that neonates were examined, 60% had their babies examined just once in the postnatal period (Mbeinkong, 2010). Kumbani, Chirwa, Malata, Odland and Bjune (2012) also found that mothers and neonates without problems were not usually assessed until on discharge at a district hospital in Malawi. Considering that neonates are vulnerable in the first 24 hours after delivery (Sines et al., 2007) and that 50% of neonatal deaths occur within 24 hours (Lawn et al., 2005); there is need for midwives to provide thorough assessment of neonates within this crucial period to ensure timely identification and management of complications.

Health Education and Counselling

Research has shown that midwives and nurses are believed to be important sources of information and their advice is most likely to be followed (Harrison, Buttner &Nowak, 2005). Study findings show that majority of midwives had knowledge on most areas of education regarding mother and neonates. Midwives indicated that they counsel women on danger signs and returning to health facility when danger signs arise; personal hygiene; family planning; nutrition; resuming coitus at six weeks; returning for one and six weeks postnatal follow-up and rest and sleep. However, findings indicate that only a few midwives gave health education to the mother at six weeks. Midwives need to be knowledgeable on areas that need counselling to ensure that women and their families are provided with appropriate information. When midwives are knowledgeable, they can help postnatal clients to be well informed which would help in promoting health practices for health outcomes.

It is believed that postnatal care is among the important health care point where family planning services may be given to clients. Providing information on family planning and services during postnatal period can help reduce unplanned pregnancies. The study findings indicate that midwives provide family planning counselling and services within the postnatal period which is important as it empowers women with knowledge for informed decision when choosing family planning method. Department of Health South Africa (2003) found that 50% of women have intercourse, often unprotected by the end of second month following delivery. It was then noted that counselling of clients for postnatal contraception was effective in preventing repeated pregnancies within a short period of time. It is important to note midwives indicating

counselling of women on family planning throughout the postnatal period which would help clients to make timely decision on use of family planning thereby promote health outcomes for both mother and neonates.

On education and counselling regarding neonatal care, study findings indicate that midwives have knowledge on most of the information, education and counselling areas which include safety; exclusive breastfeeding; danger signs and early reporting of any danger signs; continuing with immunization; delaying bathing up to 24 hours and cord care.

Counselling on breastfeeding is important as literature shows that lactation counselling improves exclusive breastfeeding (Aidam, Perez-Escamilla & Lartey, 2005). Besides promoting health of neonate, breastfeeding also helps to reduce incidence of primary PPH because the suckling reflex stimulates maternal Oxytocin which promote uterine contractions (Fraser et al., 2010). Midwives therefore need to poses good body of knowledge on breastfeeding to provide good information to women on breastfeeding which may also help prevent other breast conditions such as engorgement. Midwives knowledge on counselling women regarding rest and sleep is also important because rest and sleep promotes breast feeding as well.

Counselling women on delaying bathing of neonate is also important in prevention of infection. Tollin et al. (2005) explain that bathing predisposes the new born to infections as it removes maternal bacteria and vermix caseosa, a potent inhibiting of Escherichia coli and also eliminates crowing reflex needed for effective latching on the breast. All

midwives need to provide such important information if infection prevention is to be promoted in the neonate.

The national Prevention of Mother to Child Transmission of HIV guidelines advocate for early initiation of Antiretroviral Therapy (ART) starting at 14 weeks gestation and initiating ART after a positive HIV result during labour and after delivery (MOH, 2011). The aim is to slow progression, increase survival and reduce transmission of HIV to the baby. It is encouraging noting that midwives included provision of ART and counselling on continuation of ART for the mother as well as ART prophylaxis for the neonate. Midwives also counselled mothers to come with neonate at 6 weeks for Cotrimoxazole preventive therapy (CPT) and DBS for HIV DNA/PCR testing. This suggests that training increases knowledge as midwives indicated that most of them had undergone PMTCT training. This implies that midwives had up to date information on management of HIV postnatal women and exposed neonates. However, counselling on breast feeding did not include safe breast feeding practices which if not followed may put neonate at risk of acquiring HIV from the mother. Literatures indicate that postnatal period is the time of increased susceptibility to HIV and sexually transmitted infection (STI) for women in Eastern and Southern Africa (Department of Health South Africa, 2003; McIntyre, 2005). Midwives did not indicate counselling on re-testing for women who were found HIV negative during pregnancy as recommended that re-testing should be done for individuals who tested negative three months ago (MOH, 2011). This shows that midwives miss an opportunity to provide appropriate care to women who could be infected with HIV and transmit the virus to the neonate through breast feeding. It is imperative for midwives to use the postnatal period to provide HIV counselling and

testing as well as provide required information to prevent women and their families from acquiring HIV infection.

Midwives did not mention counselling women on postnatal exercises. Exercises during the postnatal period prevent circulatory problems, strengthen perineal muscles and help to avoid perennial discomfort and oedema (WHO, 2006). The findings imply that midwives do not inform women on postnatal exercises which are very important in restoration of healthy body to pre pregnant state and prevention of other complications such as deep vein thrombosis. The findings are in consistence with those of Chintembo et al. (2013) who reported that midwives did not mention importance of postnatal exercises during health education session.

Although midwives mentioned different areas of counselling in the postnatal period, there was no mentioning of starting education and counselling during antenatal period. One of the interventions included in antenatal care guidelines in Malawi is client education and counselling. Some of the information regarding PNC during antenatal is on danger signs for mother and neonate, importance of colostrum, early initiation of breast feeding and postnatal care in general (MOH, 2007). Literature shows that education and counselling starting from antenatal improves health outcomes in the postpartum period. Liu et al. (2009) found that women had positive outcomes on family planning use; dietary behaviour and overall health when education was intensified from ANC throughout the postnatal period. Some studies also indicate that behaviour change communication during antenatal can promote neonatal care practices, care seeking and demand for skilled intrapartum and PNC particularly in developing countries (Bhutta, Darmstadt, Hasan &

Haws, 2005).This suggests that early education from ANC amongst clients increases the likelihood that clients will develop health outcomes. Midwives therefore need to provide information on PNC from the antenatal period to improve health outcomes for both mother and neonate.

Study findings also indicate that midwives do not include significant others such as husband or significant other in provision of counselling and education. This is contrary to government initiative which seeks to actively involve men in family health issues as decision makers towards positive health outcomes (MOH, 2007). Involving men in counselling and education of women would help in decision making regarding family planning use as well as other PNC practices such as resuming coitus at six weeks which midwives indicated that was a challenge as women are counselled differently according to culture. Involving family members like spouse and significant others in health education and counselling is also important for positive maternal and new born outcome because most women and neonates are discharged early and spend most of the postnatal period at home. Furthermore, decision to initiate care or adopt preventive practices is strongly influenced by family and communities (Warren et al., 2006).

Source of knowledge

The study results indicate that midwives mostly use protocols as source of knowledge for postnatal care. This is good since protocols act as reference manuals thereby improve knowledge of providers in implementation of care. Protocols and guidelines also help in delivery of standardised care. However, protocols and guidelines do not provide up to date information regarding care as they make take time to be

updated and incorporate current information. Midwives need to use current information which can be attained through in-service training and use of internet.

Midwifery is dynamic and changes are inevitable. Besides using manuals and pre-service knowledge, midwives need to be up to date with current information which can be accessed through the use of internet. In view of this, midwifery managers need to make sure that facilities like NDH should have internet services accessible to all care providers.

In-service trainings which offer current information based on research findings has shown to increase knowledge of providers. Training of providers is essential in acquisition of knowledge which increases one's confidence in performing and maintaining a skill (Lavender & Chapple, 2004). A study in England found that basic education is no longer adequate for a lifetime of safe professional practice and recommended on-going professional development and clinical supervision to improve practice (van der Putten, 2008). Likewise Senarath, Fernando and Rodrigo (2007) found moderate improvement of health professionals after an in-service training on essential new born care. In a study that assessed perspectives of providers in use of antenatal and postnatal care in Tanzania, providers suggested that refresher courses should be offered to improve job skills (Mrisho et al., 2007). Similar findings were also reported in Malawi by Chodzaza and Bultemeier (2010). Midwives therefore need to be up to date with current information on PNC which can be provided through continuing professional development sessions.

The study findings also revealed that midwifery knowledge of postnatal care is rigid to knowledge gained from training schools and manuals on MNH. This implies that midwives do not use past experience which also offers an in-depth understanding and internalised skills on how to manage certain situations.

Availability and Utilization of Guidelines and Protocols for PNC

The study revealed that guidelines and protocols for PNC were available in the labour and postnatal wards which guided the care provided especially during health education and in management of identified problems. The guidelines were on postnatal assessment of mother and neonate; management of postnatal complications; exclusive breastfeeding; prevention of mother to child transmission of HIV (PMTCT); danger signs; general nutrition and hospital protocols on breastfeeding and infection prevention. Most midwives indicated that the guidelines were pasted on walls which made easy access to information. However, midwives from maternal and child health department did not have any guidelines for postnatal care. The study results are consistent to a study done in Tanzania which found that guidelines for intrapartum, postnatal and neonatal care were available in only one institution and that this could have been associated with suboptimal care (Nyantema et al., 2008). Contrary to the study findings, Opondo et al. (2007) in Kenya found that patient management guidelines were not available in all the eight district hospitals under study. Kumbani et al. (2012) in Malawi found that national RH standards were just kept in MCH department while labour and postnatal wards did not have protocols suggesting that providers were not using the protocols in provision of care. Guidelines assist providers in provision of evidence based care. Unavailability of

guidelines for postnatal care in MCH therefore indicates that evidence based care was not being strengthened.

Availability of guidelines and protocols in labour and postnatal wards could have contributed to the differences in knowledge of postnatal care for midwives in the wards and those in MCH department. Midwives from the wards were able to mention more components of postnatal care for the mother and neonate including care given at one and six weeks compared to those in MCH. This shows that access to information has an impact on perception of care provided with regard to knowledge. In support of this view, Warren et al, (2008) found that providers knowledge in counselling in maternal and new born complications, infant feeding and family planning improved when a new comprehensive postnatal package on counselling of postpartum clients was introduced. Maternal and new born care managers should therefore ensure that all midwives have access to guidelines and protocols for PNC to promote delivery of evidence based care.

The study findings indicate that much as guidelines were available in some departments, postnatal care mentioned by providers did not include some areas of assessment and management for the mother and neonate. This could be attributed to lack of orientation to guidelines for care. This is supported by Doyle, Asante and Roberts (2011) who conducted a survey to strengthen supervision in health sector in the Pacific region. It was found that one of the practical challenges raised among 60% of the midwives with five years of experience since attaining midwifery qualification was frequent changes in care protocols and guidelines without orientation or briefing to care providers.

Orientation of midwives and adherence to guidelines has been associated with a significant reduction in maternal morbidity (Bick et al., 2011). In Swaziland, an experimental study with the aim of repositioning and strengthening PNC revealed that midwives knowledge in postpartum care increased when midwives were oriented on new PNC service guidelines (Warren et al., 2009). Midwives therefore need to be oriented on the guidelines for care and protocols should be pasted on walls in all departments for easy access to information.

The study also revealed that midwives failed to follow what is stipulated in guidelines and protocols such as comprehensive assessment of mother and neonate as well as conducting postnatal check-ups at least twice a day due to inadequate space and work load attributed to shortage of providers in the facilities. The results are similar to findings in an Australian study that explored structure and organization of PNC in private and public hospitals. The findings showed that majority of midwives in both public and private hospitals were working on part time basis due to shortage of staff which led to compromised care as midwives failed to fulfil some of the duties such as assessing clients twice daily (Rayner et al., 2010). Shortage of staff, high work load and inadequate knowledge and skills were also identified by providers as challenges to implementation of newly introduced standards for women friendly care in Kasungu, Lilongwe and Salima districts of Malawi (Kongnyuy &Van de Broek, 2008). This suggests that even though guidelines or standards may be known by midwives, comprehensive care may not be offered due to inadequate staff among other factors.

Factors Perceived to Promote Delivery of Postnatal Care

Adequate Number of Providers

The study results showed that having adequate number of providers would help in provision of comprehensive postnatal care especially assessment of the mother and neonate. Malawi adopted strategies such as health sector-wide approach (SWAP), joint program of work (2004-2010); the 2002 six year emergency pre-service training; emergency human resource program (EHRP) of April 2004 and use of locum (Banda, 2009) to increase number of health care providers. In agreement to this development, Anand and Bärnighausen (2004) found that countries that invested in recruiting and retaining health care providers showed an improvement in quality of care provided with subsequent positive health outcomes. However, there is need to review and devise new strategies of recruiting and retaining providers in Malawi as there are still inadequate which is negatively affecting delivery of care because providers are overwhelmed with work load.

Physical Environment

Infrastructure is a crucial prerequisite for effective maternal and neonatal care. Midwives indicated that specific postnatal ward promotes comfort to clients, individualised care and observation of women and neonate for more than 24 hours before discharge. Individualised care helps in delivery of sensitive care as privacy is promoted and midwives may be able to do thorough examination of clients. One of the ways of promoting progress in health of the mother and neonate is rest and sleep (Fraser et al., 2010). If facilities do not have adequate space, rest and sleep cannot be promoted which may also affect breastfeeding.

Availability of Resources

Availability of resources is very crucial in management of PNC clients as it facilitate proper management of postnatal clients. Midwives indicated that availability of sphygmomanometers, thermometers, weighing scale and essential drugs would promote delivery of postnatal care. Availability of equipment like sphygmomanometer and thermometers help in vital signs assessment to identify any deviations from normal which if identified early, would help in timely management to prevent complications. Ministry of Health Malawi 2011 EMOnC needs assessment observed that availability of essential drugs promote timely management of complications thereby improving health outcomes. The White Ribbon alliance for safe motherhood in Malawi also noted that provision of equipment and supplies need to be enhanced in order to optimise the performance of midwives in rural areas (White Ribbon Alliance Malawi, 2014). Midwifery managers therefore need to make sure that necessary equipment and essential drugs are readily available for appropriate management of postnatal mothers and neonates.

Factors Perceived to Hinder Delivery of Postnatal Care

Inadequate Human and Material Resources

The study findings indicate that midwives failed to provide comprehensive postnatal care due to inadequate providers and lack of essential equipment and supplies. Midwives said that shortage of providers is a major challenge in provision of comprehensive care. Midwives in health centres take care of women in labour and postnatal units. At the district hospital, less than 4 midwives were allocated to postnatal unit and provided care to KMC clients as well as neonates in nursery ward. The high midwife patient ratio contributed to midwives failing to conduct thorough examination

and continuous assessments at least twice a day to both mother and neonates. In consistency to the findings, Malawi Ministry of health facility based survey conducted on emergency obstetric care actually provided in health facilities found that only 47% of the hospitals and 2% of the health centres were offering complete CEmONC and BEmONC health services respectively due to inadequate providers and materials for care (MOH, 2010). Other studies in Malawi also identified low staff levels in most government facilities which compromised the efficiency and quality of care provided (MOH, 2004; Chodzaza & Bultemeier, 2010; Chintembo et al., 2013). Similarly, interviews with care providers in a state-wide review of postnatal care conducted in private hospitals in Victoria, Australia revealed that postnatal care was provided in very busy environments. Providers failed to meet the aims of PNC (breastfeeding support, education of parents and facilitating rest and recovery for women following birth) as midwives prioritised other areas over postnatal care (Rayner et al., 2010). Mrisho et al. (2007), Ziraba et al. (2009) and Chowdhury et al. (2009) also found that inadequate human and material resources hindered delivery of comprehensive maternal and neonatal care. Providing inadequate care may result to inability to identify or treat complications that can lead to adverse consequences for the mother and neonate. If women and neonate are discharged home without thorough examination, they might go home with risk factors that may contribute to high morbidity and mortality. This implies that continuous assessment and thorough examination of the mother and neonate is a neglected area of the postpartum services. Women and neonates also need thorough assessment when admitted to postnatal ward as it helps in early identification of any problems that may arise.

The study further revealed that due to shortage of staff, midwives assigned non midwifery personnel to carry out other duties such as assessing blood pressure, temperature, giving health education and counselling. In Bangladesh, similar findings were reported in a study that assessed quality of maternal and new born care through focus group discussions with providers. The study found that the use of informal health attendants due to shortage of staff led to compromised care, inadequate technical competencies, information exchange and follow up services (Chowdhury et al., 2009). In another qualitative study to assess the importance of human resource management in health system globally; Kabene, Orchard, Howard, Soriano and Leduc (2006) found that level of health care services in all areas had decreased. Shortage of staff led to poor productivity of health services, closure of hospitals and increased waiting times. As a result, personnel lacking the required skills were used to perform critical interventions. A state wide review of PNC in Victoria, Australia also found that 43% of the hospitals interviewed had midwives providing PNC while other hospitals used non-midwifery (general nurses) to provide care. Use of non-midwifery personnel resulted to fragmented care since general nurses were not qualified to carry out full range of midwifery activities (Forster et al., 2006). It is evident that inadequate number of providers contributes to failure to provide comprehensive care which may lead to poor health outcomes. There is need to deploy at least 3 midwives per health centre and have at least four midwives in the postnatal unit to reduce work load hence promote delivery of comprehensive care. Contrary to findings of compromised care due to shortage of staff, Kebalepile and Sundby (2006) fond that though the health care system in Botswana was experiencing a critical shortage of health professional (nurses) due to HIV and AIDS, two thirds of

midwives demonstrated good practice in examination of the mother . Majority of the midwives were able to do a vaginal and abdominal examination, check for uterine involution, examine breast and measure blood pressure. This could be possible if equipment and supplies for care are available and if supportive supervision is being done as these may motivate providers to work with confidence thereby promoting excellence in midwifery care.

Availability of essential equipment and materials for provision of care contribute to delivery of comprehensive care. In this study midwives said that they lacked sphygmomanometers, thermometers, weighing scales while in some cases one sphygmomanometer was shared between labour and postnatal ward. This implies that vital signs such as blood pressure, temperature were not checked in clients. Vital signs are an important indicator of adverse changes hence assessing them in both mother and neonate is paramount. The results support findings of Chintembo et al. (2013) who reported that none of the facilities assessed in Dedza had sphygmomanometer and thermometers while Banda and Dzilankhulani (2001) also found that most government hospitals in Malawi lacked necessary equipment and supplies like gloves, speculum and sphygmomanometers for provision of maternal care services.

Essential drugs and antibiotics are crucial in management of postnatal clients. Midwives raised a challenge in lack of Vitamin A, ferrous sulphate and intravenous Metronidazole which is used in treatment of puerperal sepsis. The results are similar to Opondo et al. (2007) who reported that some drugs and materials were not available in the study sites. In the contrary, the study findings differ to those of Chintembo et al.

(2013) who found that essential drugs for postnatal care were available in all health facilities assessed.

Lack of necessary equipment and resources result in compromised care in most public facilities compared to private facilities due inadequate funding of the public facilities (Rosy, 2001). Inadequate supply of materials to health facilities might be attributed to the current economic challenges in Malawi. Managers of maternal and new born care should therefore advocate for adequate allocation of resources to improve maternal and neonatal health.

Inadequate Space

Study findings indicate that midwives failed to provide thorough physical examination and individual counselling to clients due to inadequate space. Postnatal units at the district hospital and in some health centres are combined with labour and delivery suites in the maternity ward hence do not have specific rooms for assessments and privacy with regard to individual counselling. The findings relate to those reported by Chintembo et al. (2013) that 78% of the facilities in Dedza had no special rooms for postnatal assessments. Similarly, Mgawadere (2009) also found that lack of proper structures for providing maternal and neonatal health services contributed to poor or partial service provision to clients in Lungwena health centre. Inadequate space leads to incomplete service provision to patients and clients in the postnatal period as clients are not thoroughly assessed before discharge.

Midwives' Attitude

Study results revealed that besides a few midwives having a negative attitude for unexplained reason; midwives also developed a negative attitude towards PNC due to work load and inadequate materials for provision of care. This is in line with other studies done in Malawi which have described a dysfunctional work environment in Malawi health systems as a contributing factor to reduced providers' motivation and ability to offer good care (Banda & Dzilankhulani, 2001; Kongnyuy, Hofman, Mlava, Mhango & van de Broek 2009). It was found that most health workers lack equipment, written job descriptions and must cope with shortages of drugs, supplies and equipment. The studies also found that mentorship, supervision, recognition and rewards for service providers was inadequate coupled with shortage of drugs, supplies and equipment led to reduced motivation in providers (Banda & Dzilankhulani, 2001). Similarly to findings of the study, midwives indicated lack of support in terms of supervision of care provided, lack of appraisal in performance and in-service training contributing to reduced motivation which led to midwives' negative attitude towards provision of postnatal care. Midwife managers need to conduct performance appraisals, rewards of best performing midwives which would motivate providers to improve in weak areas and in return promote delivery of comprehensive care.

The study results show that supervision of midwives was not done and managers did not provide adequate support to the providers. The study further revealed that midwife managers (supervisors) have limited time for supervision as they had other responsibilities. The results are in consistence with findings of McAullife et al.(2013) who reported that in Malawi, 34.8% of the health workers received formal supervision

(regular, pre-arranged) while 28.7% received no supervision. Other studies indicating lack of supervision of providers as contributing factors to poor quality of obstetric care at a district hospital in Malawi have been reported by Chintembo et al. (2013) and Chodzaza and Bultemeier (2010).

Supervision has shown to promote health workers motivation and increased satisfaction in care providers; improve management of resources, knowledge and practices (Suh et al., 2007; Bosch-Capblanch et al., 2010). This may in-turn improve care provided to client thereby improving health outcomes. In order to build capacity of providers through supervision, Fauveau, Sherratt and Luc de Bernis (2008) suggested that supportive supervision need to be undertaken by clinically competent midwives while allowing free and open discussion of clinical practices as well as give an opportunity for providers to acknowledge weaknesses. In agreement to this, Doyle, Asante and Robert (2011) found that frequent supervisory contacts and on-job training conducted through a survey provided an opportunity for health workers to resolve problems and learn new skills. The study findings concur with this since midwives indicated that if managers have time to supervise and provide guidance in care they would be able to identify gaps and improve in provision of care. Therefore, midwifery managers need to have time to conduct supervision as well as allow free and open discussion to give an opportunity to midwives to acknowledge their weaknesses thereby improve in delivery of care. With the EHRP strategy in Malawi, it has been observed that most of the providers recruited have inadequate training and supervision during training due to shortage of tutors and difficulty to recruit qualified students into training (Rawlins et al., 2011). This implies that providers go into the health system inexperienced hence the need for supervision

should not be undermined. Midwives therefore need close support, supervision and on the job mentoring to improve their knowledge and skills.

Limited access to refresher courses to upgrade skills is often cited as deterrent to retaining qualified health workers in public sector in Malawi (MOH, 2011).The study results revealed that in-service education was inadequate in providers and in certain cases; some providers were going for in-service training repeatedly. This contributed to some midwives developing a negative attitude. There is need to have in-service training to update providers with current information based on research findings. Maternal and new born care coordinators should arrange trainings on PNC for providers and keep records so that all providers have a chance to in-service trainings. Managers should also assess individual needs of midwives in terms of in-service trainings so that when opportunities on PNC trainings arise they should be considered.

Health workers negative attitude has been a reason cited for poor utilization of health services (Conteh, Stevens & Wiseman, 2007; Mrisho et al., 2007). Non utilization of maternal health services due to negative attitude of providers have also been reported in rural Zimbabwe and Nigeria (Mathole, Lindmark, Majoko & Ahlberg, 2004; Moore, Alex-Hart & George, 2011). Likewise Say and Raine (2007) found that negative attitude of providers lead to high maternal mortality in resource limited settings due to reduced utilization of maternal health care services including PNC. Midwives indicated that some women do not turn up for PNC. Negative attitude of midwives could be one of the reasons for women not reporting for postnatal follow up care. Maternal and new born health managers need to make sure that midwives are motivated through incentives such

as refresher trainings, supportive supervision; performance appraisal so as to improve delivery of PNC services thereby promote utilization of PNC services by community.

Knowledge and Attitude of Community Members

The study found that lack of knowledge on PNC contributed to some women not reporting for PNC check-up which midwives viewed as a hindrance to provision of care. Midwives indicated that some women do not turn up for PNC check-up because they do not perceive any importance of PNC while some midwives indicated that some women are just negligent. Midwives also indicated that some mothers do not recognise complications such as pus eye discharge in neonates as abnormal hence this affect delivery of care. Likewise, in a study that assessed service providers' perception of quality of emergency obstetric care and factors which affect the provision of quality care, midwives reported that clients had low perception of complications such as convulsions and bleeding as they were considered as part of labour and delivery which led to delay to seek care (Chodzaza & Bultemeier, 2010). Women and the community at large need to be aware of maternal and new born complication so as to promote timely seeking of care when complications occur. This can be achieved if midwives impart knowledge to communities regarding PNC and postnatal complications for mother and neonate.

Midwives also identified some cultural practices by community as hindrance to provision of appropriate care. One example was on counselling to resume coitus at six weeks where midwives indicated that clients fail to implement that because culturally, couples have to wait for six months. Prolonged abstinence may fuel spread of sexually transmitted infection in clients. There is need for midwives to provide adequate

information to all significant others involved in care provision such as men, traditional counsellors so as to improve knowledge of community members with regard to PNC.

Strengthening community linkages help create awareness about PNC services and period of follow up (WHO, 2008). There is also need to develop partnership with community providers to disseminate messages on PNC in the community. Maternal and new born health coordinators should work with significant others such as Traditional Birth Attendants (TBAs) to help disseminate information on PNC. In areas where Community Based MNH is implemented, midwives should refer women to HSAs in the catchment areas for proper follow up. Health workers also need to work in collaboration with communities to identify local customs, believes and behaviour surrounding postnatal care and address the identified issues with local leaders and other influential leaders.

General Midwives Perception of Postnatal Care

Perception is defined as a psychological process of regarding, understanding, and interpreting an event (Llson, 2000). What is perceived guides how people behave in a particular situation. The needs, desires, and personality of a person are vital in influencing perception. Additionally, it is contented that past experience and knowledge impact what is perceived.

The postnatal period is viewed by midwives as an essential component of maternity services. The study findings indicate that midwives in Ntcheu regard PNC as important to the mother and neonate because it helps in identification of complications which if managed appropriately lead to health outcomes for both. Midwives also viewed postnatal period as the time to promote health behaviours through health education

thereby promoting health outcomes for the mother and neonate. Similarly, a study that explored views of midwives in relation to the provision of systematic postpartum care in Tanzania discovered that midwives viewed their role as being a resource and support person for postpartum women (Lugina, Johansson, Lindmark & Christensson, 2002). In a state-wide review of postnatal care in Australia, midwives viewed postnatal care as being, time to educate and support women with breastfeeding and parenting skills and helping women recover after pregnancy and child birth (Rayner et al., 2010). These findings provide an understanding of the way midwives feel and think about provision of PNC.

However, in Australia, midwives were not satisfied with the care provided attributed to increased length of stay of clients and shortage of midwives. The findings are related to views of midwives in Ntcheu district who, despite considering PNC as important for health outcomes of both mother and neonate, expressed dissatisfaction with the care provided. Majority of the midwives rated the care given as being below 50% due to failure to provide comprehensive postnatal care to both mother and neonate because of work load, inadequate knowledge and skills, inadequate space and lack of necessary equipment and supplies. Similar findings have been reported by Chodzaza and Bultemeier (2010) in a study looking at provision of emergency obstetric care at a district hospital in Malawi. Health workers perceived that they provided sub-standard care due to inadequate training and refresher courses.

The study revealed that generally midwives perception of PNC in Ntcheu district is poor. This is because midwives fail to provide some of the crucial elements of PNC

due to lack of human and material resources, inadequate space to provide PNC, negative attitude of providers and lack of supervision. Midwives indicated that PNC can be delivered comprehensively if there are adequate human and material resources, positive attitude of providers and if managers provided supportive supervision.

Study Limitations

The study was based on a small and purposive sample which limits generalization of the results. However, the results provide preliminary insight regarding care of mothers and neonate in the postnatal period in similar settings. The author is a health professional working at Ntcheu district hospital. Participants' knowledge of the author's status may therefore have influenced the information given. Additionally, the background of the researcher may have influenced data interpretation and biased thematic analysis. However, being aware of the possible prejudice, the author applied the reflexivity concept which helped her to adjust in order to collect and interpret data without being distorted by personal prejudice. Applying concept of reflexivity meant that the researcher had to observe and document assumptions, biases or reactions that could have influenced collection and interpretation of data (Ulin et al., 2005).

Recommendations

Midwifery Education

The study has revealed that midwives have limited knowledge on assessment and management of women and neonates. There is need to equip midwives with necessary knowledge, skills and appropriate attitude during pre-service as well as through in-service training so that midwives are able to provide up to date care to mothers and neonates.

Midwives should also be given opportunities for continuing education so as to provide high level postnatal care.

Midwifery Practice

- Midwives need to adhere to guidelines on assessing women and neonates 12 hourly while admitted in the postnatal ward in order to provide timely interventions.

- Midwives need to assess for signs of depression in postpartum women in order to identify any development of postpartum psychosis.

- Midwives need to demonstrate cord care to women and significant others to enforce appropriate practices among clients.

- Midwives also need to involve men and significant others in care provision especially education and counselling sessions.

- Midwives need to provide HTC in the postpartum period to prevent transmission of HIV from mother to child.

Midwifery Management

- Guidelines and protocols for care should be made available and accessible in all departments to guide care provision and promote delivery of evidence based care.

- Managers of maternal and new born care should advocate for adequate allocation of resources to improve management of postnatal mothers and neonates thereby improve health outcomes.

- Maternal and new born health managers need to conduct supportive supervision to build capacity and improve performance of midwives.

- Ward managers need to conduct performance appraisal so as to give an opportunity to midwives to acknowledge their weaknesses thereby improve in delivery of care.

- Maternal and new born care coordinators should arrange trainings on PNC for providers and keep records so that all providers have a chance to in-service trainings in order to provide optimal PNC to mothers and neonates.

- Midwifery managers need to reinforce use of guidelines that mothers and neonates should be assessed while in the postnatal ward and not only on discharge.

Midwifery Research

More research is needed on the following:

- Assessing quality of care provided at one week and six weeks postnatal check-up.

- Assessing community's knowledge, attitude and practice on postnatal care.

- Assessing Women's perspective of the postnatal care received.

- Impact of postnatal cultural practices on health of mother and neonate.

Summary

The study has shown that midwives have limited knowledge of PNC especially on care provided at six weeks for both mother and neonate. Areas that need improvement include physical assessment at six weeks to asses if mother has returned to pre pregnant state or have any existing complications requiring management. Screening for postpartum depression also needs to be emphasized. Contrary to assessment of women while in hospital, the study revealed that neonates were mostly assessed once on discharge while at six weeks no physical assessment was done to neonates as well. This was also noted in a Kenyan study and other studies done in Malawi.

The study also revealed missed opportunities in education as midwives did not include other family members such as men (spouse) since they play a crucial role in decision making at household level. Another notable area was on provision of HIV testing and counselling in the postnatal period as well as safe breast feeding practices for HIV positive women which help in reducing chances of transmitting the HIV from mother to child.

The study also revealed that most guidelines in postnatal care, which were regarded as a source of knowledge for care, were available in labour and postnatal wards unlike the MCH department. This is different from other studies done in Malawi where guidelines were present in MCH though not used. The study therefore shows that evidence based care is not strengthened as some midwives do not refer to what is stipulated in guidelines and protocols.

It has been observed, however, that despite presence of guidelines in some wards, midwives failed to adhere to provision of standard care due to inadequate human and material resources, inadequate providers and lack of supervision and mentorship. This has also been noted in some studies done locally and internationally. Besides inadequate staff, equipment for care and supervision, the study shows that lack of in-service training on postnatal care which helps in improving knowledge and skills also contributed to delivery of incomprehensive care.

The study has also shown that some cultural practices done by the community interfere with delivery of comprehensive care as women prefer to practice what is being told by community counsellors than midwives. Inadequate knowledge on postnatal care and complications by community members has also shown to negatively affect delivery of postnatal care.

It is therefore recommended that midwives should be equipped with necessary body of knowledge on post natal care through in-service training, mentorship so that midwives are able to provide up to date care. Midwives also need to adhere to stipulated guidelines of care so as to provide standard care in all health facilities. There is also need to provide adequate equipment and supplies to assist midwives in provision of comprehensive postnatal care.

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Appendices

Appendix 1: Budget

ITEM	COST OF ITEM	TOTAL COST
STATIONERY		
6 Reams of Papers	K1,500/ream	K9,000.00
10 Ball point pens	K100 each	K1000.00
5 Pencils	K75 each	K375.00
4 Erasers	K150 each	K600.00
5 Sharpeners	K150 each	K750.00
3 Tippex	K600 each	K1,800.00
20 Small envelopes	K30 each	K600.00
30 A4 envelopes	K100 each	K3,000.00
2 Flash disk	K5,000 each	K10,000.00
1 Puncher	K2, 500 each	K2,500.00
2 Lever arch file	K1, 200 each	K2,400.00
1 Stapler machine	K1, 500 each	K1,500.00
1 Box staple wires	K700/box	K700.00

1 Audio digital Recorder	K 90, 000.00	K90,000.00
4 Rechargeable batteries	K1,000.00/each	K4000.00
2 Flat files	K400 each	K800.00
Postage stamps	K165.00	K1,435.00
SUB TOTAL		**K124, 310.00**

PRINTING AND BINDING CHARGES		
Interview guides		K8,000.00
Printing 4 proposals Binding 4 proposals	K600 each K200 each	K2, 400.00 K800.00
Printing 3 permission letters	K15 each	K45.00
32 Consent forms	K15 each	K480.00
Printing 5 dissertations	K1500 each	K7,500.00
Binding 5 dissertations	K5000 each	K25,000.00
COMREC approval fee	K50,000	K50,000.00

SUB TOTAL		**K71, 025.00**
TRANSPORT CHARGES		
Transport of researcher to and from study sites		K65,000.00
OTHER COSTS		
Air time	K7,000.00	K7,000.00
2 Crates soft drinks and Snacks	8,000.00	K8,000.00
SUBTOTAL		**K30,000.00**
Contingency		K22, 633.50
GRAND TOTAL		**K247, 968.00**

Justification

The presented budget will carter for stationery; printing services; transport and other activities such as communication. Stationery will be required in form of photocopying paper, toner and other accessories. These will assist in printing, photocopying of proposal, interview guides and thesis. Funds will also be required for

transport and airtime. Transport will be required to visit the study site .The researcher will be communicating with the research supervisors, participants, departmental and facility managers to check on other areas requiring clarification and reminding participants on interview dates. Binding services will be required for proposals and final thesis. These need to be bound prior to sending them for easy transportation as well as marking. The funds are required for smooth running of all activities.

Appendix 2: Timeline of study

Activity	Month											
	March 2013	April 2013	May 2013	June 2013	July 2013	Aug. 2013	Sept. 2013	Oct. 2013	Nov. 2013	Dec. 2013	Jan. 2014	Feb. 2014
Development of research proposal												
Sending proposal to COMREC												
Approval of proposal												
Pre-test												
Data collection												
Data analysis												
Report writing												
Binding and submission of the dissertation												

Appendix 3 (a): Focus Group Discussion Guide on Postnatal Care

Total focus group time: …….

Number of Participants: ……..

Moderator: .....

Note-taker: ……..

Discussion Guidelines:

- The discussion is informal, there's no need to wait for the facilitator to call on you to respond. In fact, you are encouraged to respond directly to the comments other people
- If you don't understand a question, please let the facilitator know. The facilitator will be asking questions, listening, and make sure everyone has a chance to share while the note taker will take notes to compliment the recorded information.
- You will be asked that you all should keep each other's identities, participation and remarks private. It is hoped that you'll feel free to speak openly and honestly.
- As discussed, we will be recording the discussion, because we don't want to miss any of your comments. No one outside of this room will have access to the recorders and they will be destroyed after our report is written.
- There is no right or wrong answer as these are your views and we respect that

Opening (5min)

Opening remarks; self introduction and explanation of discussion guidelines/rules.

Demographic Data

- Age …….
- Education level …….....
- Professional qualification …….
- Length worked in the postnatal ward ……..

Part A: Midwives knowledge of postnatal care

Today we are here to talk about postnatal care.

INTERVIEWER: What comes to mind when you think about PNC?

INTERVIEWER: What kinds of services do you provide to women?

and neonates in the post partum?

Probes: Are you satisfied with the services you render?

Elaborate

INTERVIEWER: Can you describe your own experiences of providing post natal care to mothers and neonates?

Probes: How important do you, as midwives, seem to think PNC is?

How would you rate the PNC provided to your clients?

INTERVIEWER: Please describe the source of knowledge most frequently used in your midwifery practice?

INTERVIEWER: What changes would you like to see made to the current postnatal care practice in your department

Part B: availability and use of PNC protocols /guidelines

- **Availability and utilization of protocols**

INTERVIEWER: What guidelines and protocol does the facility have to guide the provision of postnatal care?

- Main Probe: Are you aware of any protocols with regard to postnatal care?

Probes : How do you use the protocols for PNC?

Elaborate

: How user friendly are the protocols / guidelines/ standards?

Main Probe: What are the main contents of the protocols that

allow you to do that would have been impossible or

more difficult to do if they were not available?

Probe: What impact if any, do PNC protocols / guidelines have

on your decision making or midwifery practice?

: How accessible are the PNC protocols to providers

Part C: Factors that facilitate or hinder provision of postnatal care

INTERVIEWER: In your own opinion, what facilitate delivery of postnatal care at this facility?

: What factors would you describe as hindrances to providing comprehensive postnatal care?

: What should be improved with regard to provision of PNC?

INTERVIEWER: Is there anything else you would like to share with us regarding PNC?

Closing remarks: Participants thanked for participating and that once the report is ready it will be disseminated to the facilities of NU.

Appendix 3 (b): Interview Guide for Key Informants

Part A: demographic characteristics

Demographic Data

- Age …….
- Education level …….....
- Professional qualification …….
- Length worked in the postnatal ward ……..

- ***Perception of postnatal care***

INTERVIEWER: What are your views in providing postnatal care to mothers and neonates?

Main Probe: Tell me about your own experience of caring for mothers and neonates in the postnatal ,

Probes: How do you provide the care?

: What services do you provide to mothers and neonates?

: How do you ensure that mothers get comprehensive postnatal care?

: Which type of health care providers do provide postnatal care in your facility?

- ***Factors perceived to facilitate or hinder provision of post natal care***

INTERVIEWR: In your view, what promotes delivery of comprehensive postnatal care?

: In your opinion, what hinders provision of comprehensive postnatal care?

: In your opinion, how can challenges in delivery of comprehensive postnatal care be overcome?

Appendix 4 (a): information sheet

My name is Lucy Florence Nyirenda. Currently, I am a student at Kamuzu college of nursing (one of the constituents of the University of Malawi), pursuing a Master's Degree in Midwifery. As part of course requirement, I am carrying out a study on midwives perception on postnatal care in Ntcheu district. The study will be conducted at Ntcheu district hospital; Kasinje; Tsangano; Kapeni and Biliwiri health centres. The study aims to explore the views of midwives on postnatal care provided to mothers and neonates at the facility. The findings of this study will help to identify gaps in delivery of postnatal care that need improvement to promote the health of mothers and neonates.

Do I have to take part?

You are free to take part or to withdraw at any time you feel like without giving reasons. Your refusal to take part in the study will not risk your job in anyway. If you agree to take part in the study, you will be asked to sign a consent form. Information about you will be confidential and no one will identify who answered which questions as no names will be linked to the discussions. Code numbers will be used instead of names. The recorded interviews will be destroyed at the end of the study. Study findings will be published or presented as group findings not individual information.

If I take part, what will happen?

You will be asked some questions about the postnatal care package that you provide to women and neonates. The FGD may take 45 to 60 minutes and the in-depth interview will take 30-45 minutes.

What are the possible risks for taking part?

There are no physical risks associated with the study. The probable risk includes the psychosocial risks in terms of long time of attending to the interview about your practice regarding postnatal care.

What are the possible benefits of taking part?

There are no immediate benefits. However, the findings of the study will assist in determining the maternal and neonatal health care services provided in the postnatal period at the facility so that possible modifications are made to promote delivery of the services. There are no financial benefits from the study but you may have a soft drink during the discussion / interview.

If something goes wrong, what will happen?

Complaints concerning how you have been treated during the course of the study can be forwarded to: Lucy F. Nyirenda, Kamuzu College of Nursing, Post Office Box 415, Blantyre.

OR

The Secretariat, COMREC, Private Bag 360, Blantyre.

Tel: 01871911

Contact for further information

If you need further information or you are worried about any aspects of the study please contact Ms. Lucy Nyirenda, cell number: 0888 500 562 and Ms Pat Donovan; Tel: 0996 573 191

Appendix 4 (b): Consent form for in-depth interview

PLEASE READ AND SIGN THIS FORM IF YOU ARE TAKING PART IN THIS STUDY

- I have read the attached information sheet for this study and have understood the purpose of the study and the problems involved
- I agree to voluntarily participate in the study, be questioned and provide answers to the best of my knowledge. I understand that I am free to withdraw any time without giving reasons and this will not risk my job in any way.
- I know that I do not have to suffer any injury or harm during the research process. The information that I will give to the researcher should not be used against me in the future.
- I understand that the information given will be kept confidentially and will only be accessible by the researcher or those people directly concerned with this study
- I understand that I will not benefit financially
- I know how to contact the researcher if I need to

…… …….

…….

Midwife's Name Signature Date

……. ……. …….

Researcher's Name Signature Date

THANK YOU FOR TAKING PART IN THIS STUDY

Appendix 4 (c): informed consent to participate in focus group discussion

I have read and understand the content of the focus group information sheet. I have been given the opportunity to submit/ask questions that I might have regarding the procedure and my consent to being included in the study. I consent to take part in a focus group about my experiences on postnatal care. I also consent to be tape recorded during this focus group discussion.

I may at any stage without any consequences withdraw my consent and participation in the study. The information that I provide during the focus group will be grouped with answers from other people so that I cannot be identified.

I hereby give permission, voluntarily to be included in the study by my signature below:

…… …….

…….

Midwife's Name Signature Date

……. ……. …….

Researcher's Name Signature Date

THANK YOU FOR TAKING PART IN THIS STUDY

University of Malawi

Kamuzu College of Nursing

Post Office Box 415,

BLANTYRE

18th July, 2013.

The District health Officer

Ntcheu District Hospital

Private Bag 5

NTCHEU

Dear Sir/ Madam

PERMISION TO CARRY OUT A RESEARCH STUDY

I write to seek permission to carry out a research study at Ntcheu District hospital and Kasinje, Tsangano, Kapeni and Biliwiri health centres. I am a student currently studying Master of Science Degree in Midwifery at the above institution. In partial fulfilment for the degree, I am supposed to carry out a research study related to midwifery practice on a topic of my choice. The title of the research project is "Midwives perception of postnatal care provided in Ntcheu District". Please find the attached proposal for details.

I look forward to your favourable response to my request

Yours faithfully,

LUCY NYIRENDA F. (Ms)

Telephone: + 265 01 235 200
Facsimile: + 265 01 235 459

All Communications should be addressed to:
THE DISTRICT HEALTH OFFICER

In reply please quote No. NDH/PF/
MINISTRY OF HEALTH
NTCHEU DISTRICT HOSPITAL
PRIVATE BAG 5,
NTCHEU.

19th July,2013

MS Lucy Nyirenda

Kamuzu College of Nursing

P.O Box 415,

Blantyre.

Dear Madam,

AUTHORITY TO CARRY OUT A RESEARCH STUDY ON MIDWIVES PERCEPTION OF POSTNATAL CARE PROVIDED IN NTCHEU DISTRICT

I write to inform you that your request to conduct a research study at Ntcheu District Hospital, Kasinje, Tsangano, Kapeni and Biriwiri Health facilities has been granted. I wish you all the best in your undertakings.

Yours faithfully,

Nitta Nayeja,
DISTRICT HEALTH OFFICER

MINISTRY OF HEALTH
NTCHEU DISTRICT
HOSPITAL
19 JUL 2013
REGISTRY
PRIVATE BAG 5, NTCHEU

CERTIFICATE OF ETHICS APPROVAL

This is to certify that the College of Medicine Research and Ethics Committee (COMREC) has reviewed and approved a study entitled:

P.08/13/1435— Midwives Perception of Postnatal Care Provided in Ntcheu District by Ms. Lucy Florence Nyirenda

On 20 August 2013

As you proceed with the implementation of your study, we would like you to adhere to international ethical guidelines, national guidelines and all requirements by COMREC as indicated on the next page

Dr. F. Dzinjalamala ; Vice-Chairperson (COMREC)

Approved by College of Medicine
20 AUG 2013
(COMREC) Research and Ethics Committee

20th August 2013
Date