

**UNIVERSITY OF THE WESTERN CAPE  
FACULTY OF COMMUNITY AND HEALTH SCIENCES  
SCHOOL OF NURSING**

**DEVELOPING STRATEGIES TO ENHANCE IMPLEMENTATION  
OF EARLY KANGAROO MOTHER CARE (KMC) GUIDELINES IN  
HEALTH CARE FACILITIES IN EDO STATE, NIGERIA**

**A thesis submitted in fulfillment of the requirements for the degree of  
Doctor Philosophiae in the School of Nursing, University of the  
Western Cape**

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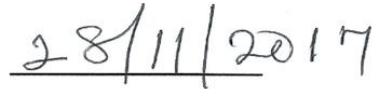
## DECLARATION

I, Roselynd Ejakhianghe Esewe, declare that the dissertation entitled: *'Developing Strategies to Enhance Implementation of Early Kangaroo Mother Care Guidelines in Health Care Facilities in Edo State, Nigeria'* is my own work and has not been submitted for any other degree or examination at any university other than the University of the Western Cape. I have given full acknowledgement to the resources referred to in my study.

Roselynd Ejakhianghe Esewe



**Signature**



**Date**

## **DEDICATION**

To my late father, Pa William Osenaja Obiomon who envisioned my prospects early and displayed complete confidence in my ability to excel beyond all human imagination even in my tender and formative years.

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‘To God be the glory, great things He has done! This is the song God has put in my heart because I may not be able to express the manifold grace I received from numerous persons and significant others during this tortuous journey of my educational pursuit.

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## LIST OF ACRONYMS

AAP	American Academy of Paediatrics
AAPS	Association of American Physicians and Surgeons
ACOGG	American College of Obstetrics and Gynaecology
ACNM	American College of Nurses and Midwives
ACNO	Assistant Chief Nursing Officer
ADNS	Assistant Director of Nursing Services
ANC	Ante-natal Clinic
ANSI	America National Standards Institute
ASQ	America Society for Quality
BDPA	Bendel Development and Planning Authority
BGH	Bureau of Global Health
BW	Birth Weight
BWT	Body Weight
CKMC	Community Kangaroo Mother Care
CMD	Chief Medical Director
COINN	Council of International Neonatal Nurses
DNS	Director of Nursing Services
EBF	Exclusive Breast Feeding
EBFD	Early Breast Feeding
EBM	Expressed Breast Milk
EDSG	Edo State Government
EDSMOH	Edo State Ministry of Health
ENC	Essential New Born Care

FGN	Federal Government of Nigeria
FIGO	Federation of Gynaecology & Obstetrician
FMOH	Federal Ministry Of Health
F	frequency
HIC	High Income Countries
ICN	International Council of Nurses
ICM	International Confederation of Midwives
ICT	Information and Communication Technology
KAP	Knowledge Attitude and Practice
KC	Kangaroo Care
KMC	Kangaroo Mother Care
LBW	Low Birth Weight
LGA	Local Government Area
LMIC	Low and Middle Income Countries
M	mean
MCHIP	Maternal & Child Health Integrated Programme
MDGs	Millennium Development Goals
MNCH	Maternal & Child Health
NMCN	Nursing & Midwifery Council of Nigeria
N	Population
n	Sample
NAS	Nigeria Academy of Science
NANNM	National Association of Nigeria Nurses & Midwives
NHREC	National Health Research Ethics Committee of Nigeria
NIC	Neonatal Intensive Care



NICU	Neonatal Intensive Care Unit
NICN	Neonatal Intensive Care Nurses
O & G	Obstetrics and Gynaecology
OED	Oxford English Dictionary
OHWs	Operational Health Workers
PHC	Primary Health Care
PHCc	Primary Health Centre
PI	Problem Identified
PNO	Principal Nursing Officer
PRRINN	Partnership for Review of New Born & Child Health
PROM	Premature Rupture of Membranes
SCBU	Special Care Baby Unit
SD	Standard Deviations
SDG	Sustainable Development Goals
SSC	Skin-To-Skin Care
SL	Senior Lecturer
SN/SM	Staff Nurse/Staff Midwife
SoN	School of Nursing
TQ	Total Quality
TQM	Total Quality Management
TQMe	Total Quality Management elements
TV	Television
UBTH	University of Benin Teaching Hospital
UHC	Universal Health Coverage
UNIBEN	University of Benin

UNICEF	United Nations Children's Fund
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
UWC	University of the Western Cape
U-5s	Under fives
WHO	World Health Organisation

## **ABSTRACT**

The number of healthcare institutions that has embraced Kangaroo Mother Care (KMC) as an effective and efficient method of neonatal care especially in Edo State, Nigeria has not multiplied even after more than a decade of its recommendation by the World Health Organisation (WHO) in 2003. Nigeria ranks seventh among the ten African countries where newborns have the highest risk of dying with over 700 newborn deaths per 10,000 live births. This is worrisome because Edo State is one of the 36 states in Nigeria that contribute about 6,700 neonatal deaths to the 255,500 mortality rate recorded in Nigeria annually. This has led to a concern about the knowledge and attitude of the key drivers in neonatal care of simplified methods aimed at reducing neonatal mortality despite previous training efforts.

The development of a strategy to enhance the early implementation of the WHO KMC guidelines in all healthcare facilities across the state was therefore conceptualized. Strategies to increase implementation are considered important to the success of KMC because reducing neonatal mortality rate is contextual. This research aimed to explore and describe the application of the KMC guidelines by the nurses, administrators and parents of preterm infants in the care of premature babies and to develop strategies to enhance its early implementation in healthcare facilities in Edo State, Nigeria.

The study was in two phases. A multi method design with quantitative and qualitative exploratory, descriptive research strategies was employed in phase one. The first seven objectives of the study was explored by a comprehensive literature review and empirical research by the application of the health policy analysis triangle. A five-point structured questionnaires (Likert-type) and a normative form was designed and self-administered. It explored and described the knowledge, attitude, practice and challenges encountered in the implementation of KMC by 55 operational health care workers, and 4 administrators. The qualitative aspect entailed structured interview sessions with 13 mothers of premature babies to

explore the effect of socio-cultural practices on KMC uptake. Findings from the study indicated that despite the OHWs demonstrating a positive attitude 55 (100%), they perceive KMC facilitation as a burden to their already busy schedule 27(49.1%), while gaps in knowledge on some aspect of KMC by 10 (18.2%) was discovered. Challenges reported were lack of awareness of the KMC policy document 30 (54.4%) and training to refresh knowledge 44 (80%). In the same vein, the administrators possessed good attitude 4 (100%), they however did not all 1 (25%) agree on some aspects of the KMC advantages. They reported challenges occasioned by lack of funds and space respectively to perform holistic administrative duties as well as send staff for training on KMC 4 (100%). All the mothers of preterm infants 13 (100%) lacked information on KMC prior to admission in the health facility. They did not report any socio-cultural barriers affecting KMC practice 13 (100%) but hindrances such as misconception and lack of understanding by some significant others. Challenges reported were boredom, inadequate time to practice KMC due to the nurses' poor attitude and lack of infrastructural, human and material resources 13 (100%).

Forty-43 conclusion statements were made based on identified problems by the OHWs, the administrators and mothers of preterm /LBW babies. This formed the basis for the strategic process in phase two which was objective eight of the study. The Total Quality Management (TQM) philosophy of Tenner and De Terro and the Bryson process of strategy development was used to develop a vision, mission, values, principles, assumptions, strategic objectives, and functional tactics to solve identified problems. Finally, the quality of the developed strategies was further assessed by the application of the Delphi process by experts and panelists who served as quality assurers for the authenticity and applicability of the strategies.

These findings justify that the concept of the frameworks used in the study and indicates that before any policy is made, the actors or implementers ought to be involved from conceptualization to the implementation phases. The research was evaluated, and the following

recommendations for midwifery and neonatal nursing was made: (1). Further studies should be undertaken in the actual implementation of the developed strategies and evaluation of their effects on neonatal mortality reduction after a specified period of time, for example, one year. (2). KMC perception by PHC workers should be evaluated. (3). Awareness and utilisation of KMC guidelines among health workers in the private sector should be investigated. With regards to nursing practice, the study recommends non-discrimination against nurses from private institutions and PHCc in terms of workshops and seminars because a handful of these preterm deliveries take place at the PHCc and private clinics.

**KEYWORDS: Kangaroo Mother Care, Health Facilities, Edo State, Strategy, Total Quality Management, Socio-Cultural Practices.**

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## **CHAPTER ONE**

### **ORIENTATION TO THE RESEARCH STUDY**

#### **1.1 INTRODUCTION**

This chapter provides an overview of the study and the problem identification. It starts with the background of the study, and its rationale is succinctly outlined. The research questions and objectives, the significance of the study and definition of key concepts are highlighted. Finally, the researcher's assumptions with regards to the ontological, epistemological and methodological dimensions are discussed, with the design and methodology used in this study. This is followed by the chapter outline.

#### **1.2 BACKGROUND OF THE STUDY**

An expectant woman and members of her family are usually ecstatic and filled with joy on the realization of being pregnant. They all wait patiently to welcome their bundle of joy which is expected after nine months. Sometimes this hope is dashed as the baby suddenly arrives unannounced and before 37weeks. The birth is premature as the pregnancy did not get to 40 weeks gestational period, which is regarded as full term. This event has the potential to throw the whole family into a long period of despair which may be made worse if the mother and baby have some complications or either of the two did not survive (Chisenga, Chalanda, & Ngwale, 2015). Childbirth and the immediate postpartum period are times when the life of the mother and baby are most at risk (Eberhard-Gran, Garthus-Niegel, Garthus-Niegel, & Eskild, 2010). Prematurity is when a baby is born at less than 37weeks gestational age (WHO, 2012b). It is one of the most common causes of neonatal mortality globally; it accounts for 4 million out of a total of 15 million neonatal mortality during the neonatal period (Blencowe, Cousens, Oestergaard, Chou, Moller & Narwal et al., 2012a). One of the major complications of prematurity is hypothermia which arises due principally to the large

body surface and lack of subcutaneous fat under the skin of the infant (Kinney, Kerber, Black, Cohen, Nkrumah, & Coovadia et al., 2010; Kumar, Shearer, Kumar & Darmstadt, 2009).

### **1.2.1 Brief Introduction of KMC**

Historically, most traditions practice thermal care for the newborn and regard it as very essential for the survival of the neonate. This is provided at home by the mother and other women of the immediate and extended family (Mrisho, Schellenberg, Mushi, Obrist, Mshinda & Tanner et al., 2008). Warmth is provided in the delivery room prior and immediately after birth. This could be by shutting out any form of draught to the mother and baby as they are both kept as warm as possible in a room with windows seldom opened and with some form of local heat (fire wood) production.

The baby is dried and wrapped in warm blankets or thick clothing after cleansing the body with palm or coconut oils. In some customs especially in Ghana, a warm bathe which is believed to prevent body odor in the baby in later life is given to the baby (Hill, Tawiah-Agyemang, Manu, Okyere, & Kirkwood, 2010). Similar to the aforementioned, the postpartum woman and her infant in countries like Nigeria (Calabar) are isolated in a special “fattening room.” where the doors and windows are seldom opened, but the mother is provided with rich and nourishing meals.

The baby is not taken out to the farm or market until at least two to three months after birth when the mother is said to have rested enough and the baby had gained weight (Kelly, 1967). As the baby matures, it is strapped supine with the legs spread across the mother’s back. The aim of strapping the baby to the back is not to provide warmth, but mainly for bonding and pacifying the baby or for convenience. This type of care is mainly for full term deliveries

with no complications. The same method is used to nurse preterm births that are lucky to survive, but more attention is paid to providing warmth by wrapping the baby with extra thick blankets, delaying the first bath and not bathing the baby every day. With the shift of childbirth from the home to the hospital, the care and survival of neonates have improved and KMC has been initiated with the support and supervision of the healthcare staff especially the midwives and neonatal nurse (Nyqvist, Anderson, Bergman, Cattaneo, Charpak, & Davanzo, 2010).

The second major cause of neonatal mortality globally is prematurity, the first been birth asphyxia (28%). Reports indicates that the estimated preterm birth rates and total number of preterm births for 2010, Sub Saharan African region have a total of 32,100 000 (12.3%), while Asian countries like Eastern Asia have 17,400000 (7.2%) , Latin America 10, 200 000 (8.4%) 852 800 of the Total 135 000 000 (11.1%) worldwide (Blencowe, et al., 2012a).

Fifty four percent of the global three million estimate of infant mortality occurs in Nigeria with Edo State contributing 6700 neonatal deaths to the 255,500 mortality rate recorded in Nigeria (NDHS, 2017).

Factors responsible for preterm labour are pre-eclampsia or eclampsia, intrauterine growth restriction, premature rupture of the membrane (PROM) and intra uterine infection. Additionally, risk factors for spontaneous preterm births include a previous preterm birth, multiple pregnancy, black race, and low maternal body-mass index. A short cervical length and a raised cervical-vaginal fetal fibronectin concentration are also predictors of spontaneous preterm birth (Goldenberg, Culhane, Iams, & Romero, 2008). Other indirect factors responsible for neonatal mortality are poverty, ignorance, lack of skilled attendance at

delivery as well as teenage pregnancy (Hayat, Kareem, Hussain, Ali, & Khan, 2012; Blencowe et al., 2012a; Blencowe et al., 2012b).

Hypothermia can be mediated by nursing the preterm in an incubator to provide the needed temperature for survival where available. Many infants have died because incubators were not readily available (Friberg, Kinney, Lawn, Kerber, Odubanjo, Bergh, & Black, 2010; Amadi, Azubuikwe, Etawo, Offiong, Ezeaka & Olateju, et al., 2010). A cheap and scientifically proven method to provide heat for the baby is through the Kangaroo Mother Care (KMC) technique. This is a method of care for new born babies especially those born prematurely and those who are mature but with a low birth weight (LBW) of less than 2.5kg. It requires that “a baby is strapped early in a prolonged, and continuous skin-to-skin contact in an upright position against a mother’s bare chest or substitute both in hospital and after discharge, until at least the 40th week of postnatal gestational age” (Charpak & Ruiz-Pelaez, 2006: 515).

The World Health Organization (WHO) formally endorsed KMC by publishing a “KMC practice guideline” in 2003 in order that countries can formulate policies, protocols and training manuals in this regard (WHO, 2003: 2). This forms part of a series of interventions which the WHO recommended for adoption by all countries in meeting the needs of the preterm and LBW infants aimed at reducing neonatal mortality (Charpak, Ruiz, Zupan, Cattaneo, Figueroa, & Tessier et al., 2005). It is recommended for use in all facilities providing neonatal care irrespective of whether incubators are available; be they low, medium and high income generating countries.

Several studies have documented the success of KMC globally (Bergh, Manu, Davy, Van Rooyen & Asare et al., 2013; Ibe, Austin, Sullivan, Fabanwo, Disu, & Costello, 2004; WHO,

2004). Both mother and infant derive great benefits from this intervention. For the infant, KMC has proven beneficial in mortality reduction effects for babies weighing less than 2kg. It is a successful project put in place to reach all premature babies and was projected to have the capacity to have saved 19,000 lives in 2015 (Aboda & Williams, 2011). It enhances infant physiologic stability and reduces its pains as evidenced by reduced cry and restless movement of the body. Furthermore, there is increase in parental sensitivity to infant cues due to the bonding effects created by KMC (Nyqvist et.al., 2010). For the mother, it reduces maternal stress and postpartum depression. It is cost-effective and accessible because it does not require complicated facilities (Davanzo, Brovedani, Travan, Kennedy, Crocetta, & Sanesi et al., 2013). Chan, Labar, Wall, and Rifat (2016), remarked that in the developed and some developing countries, KMC have been embraced as a method of neonatal care. However, its adoption has been poor in Nigeria, a country that has the highest absolute number of newborn deaths among countries in Sub-Saharan Africa with 28% premature births (NAS, 2009). This is worrisome especially in Edo State where the adoption of KMC in healthcare facilities have been almost non-existent. This study therefore aims to develop strategies for the early implementation of KMC guidelines in healthcare facilities in Edo State, Nigeria, based on the researchers' observation which requires a paediatrician to give the go ahead for KMC practice to the operational health workers before its implementation. Many a time, this comes late due to the busy schedule of the doctors leading to loss of valuable time.

### **1.2.2 Rationale for the Study**

The term KMC is derived from similarities to the animal named kangaroo and how it cares for its young by having the mother serve as “incubator” to maintain the infants' body temperature. The mother also serves as the main “source of food and stimulation for the LBW infants” until they are mature enough to face life outside the uterus in near to similar

conditions as the babies that are born full term (Shrivastava, Shrivastava, & Ramasamy, 2013:340).

The role of the health worker in this critical period following preterm birth cannot be over-emphasised. They help the mother to become her baby's primary caregiver by helping to initiate early breastfeeding and bonding through KMC. Thermal care is a key component of community newborn interventions which is provided by birth attendants and community extension workers (Hill et al., 2010). The goal of KMC is to reduce the risks of mortality and morbidity due to hypothermia, hypoglycemia and infection by employing cheap, available and accessible methods (Bergh, et al., 2013; FMOH, 2011). The WHO had called for improvement in the care practices concerning the new born as part of measures directed at reducing morbidity and mortality rates. It recommends the Essential New Born Care (ENC) practices which includes clean cord care, thermal care and initiation of breastfeeding within the first hour after childbirth to meet this objective (Marsh, Darmstadt, Moore, Daly, Oot, & Tinker, 2002). KMC is a form of thermal care recommended as part of neonatal and infant care practices based on its reported success in developed and some developing countries (WHO, 2013; Boundy, Dastjerdi, Spiegelman, & Wafaie, 2016). It has recorded tremendous successes in countries such as China, South Africa, Ghana, as well as Nigeria (Bergh et al., 2013; Ibe, et al., 2004).

The adoption of KMC for neonatal care in Nigeria ought to be the norm and not just a fashionable thing because the country currently has the highest absolute number of neonatal mortality rate of 41/1000 live births among countries in Africa between 1990-2013 (Friberg et al., 2010; Akinyemi, Bamgboye, & Ayeni, 2015). Nigeria contributes up to 28% premature births and 54% infant mortality in Sub Saharan Africa. The annual neonatal birth estimate is

912,000, but sadly, 255,500 of these die annually in their first 28 days of life. According to reports from the Nigerian Demographic Health Survey of 2015, Nigeria ranks seventh among the ten African countries and second globally after India where newborns have the highest risk of dying with over 54% of the global three million estimate of infant mortality; that is-36 newborn deaths per 10000 live births (NPC, USAID & UKaid, 2013; Blencowe et al., 2012b; Bhutta, 2012).

Although Nigeria constitutes just 1% of the world's population, it accounts for 10% of the world's maternal and under-5 years (U-5) mortality rates (Morakinyo & Fagbamigbe, 2017). The U-5s mortality rate of 128/1000 live birth is still above the Sustainable Development Goal (SDG) 2030 recommendation of 12/1000 live births for neonates and at least 25/1000 for U-5s as espoused in goal 3 (UN, 2015). Though a decline in infant mortality of 49/1000 to 34/1000 (20.4%) was recorded between 1990-2015, as reported by Morakinyo and Fagbamigbe (2017), the pace is slow hence the country's inability to meet the MDG target of 2015 which had come and gone. A lot remains to be done to accelerate the pace of infant mortality reduction to meet the new target of goal 3 in the SDG 2030 (UN, 2015).

To mediate the problem of neonatal mortality, health workers active in the neonatal and maternity environment such as neonatal intensive care nurses (NICN) and midwives are of immense value. They play a key role in terms of the facilitation of KMC, they give information, constant reassurance as well as provision of comfortable environment and privacy to the parents of preterm infants (Bergh, Manu, Davy, Van Rooyen, Asare, & Williams et al., 2012; Nyqvist et al., 2010). They can positively influence the relation between the mother and her preterm infant if they are empowered with the relevant knowledge and skills to guide parents to overcome their fears of the survival of the preterm/LBW infants.

The knowledge and facilitation provided by the health workers in the neonatal environment, enable the parents especially the mothers to develop bonding relationships with their infants (Bergh et al., 2012). Notwithstanding, the roles of the parents need to be recognised as well as the reasons for their resistance. The success of KMC implementation depends to a large extent on parents especially mothers. Therefore, the parents' attitude and challenges in relation to local and cultural practices are key to KMC implementation since they are determining factors as to whether or not parents perceive KMC to be a positive experience or not.

Some reasons for resistance to KMC implementation globally has been attributed to health workers' attitude and perception of KMC as an additional task. Also, parents especially mothers have not been sufficiently mobilised for the task, bearing in mind the different cultural perspectives and hindrances (Nyqvist et al., 2010). However, the reason for the poor adoption of KMC in Edo State despite its incorporation in some of its infant health policies by the Federal Government Nigeria is unknown. This is worrisome because Edo State is one of the 36 states in Nigeria that contributes about 6700 neonatal deaths to the 255,500 mortality rate recorded in Nigeria. According to the 2010-2015 strategic health development plan for the state, infant mortality still stands at 100/1000 live births, U-5 mortality rate is 191/1000 because close to 40% of child births are not attended to by a health professional, while 700 out of the 1000 live births die from complications of pregnancy (ESMOH, 2010).

Strategies to scale up implementation guidelines are important to the success of KMC because reducing neonatal mortality rate is contextual. This should be prioritised if a country is serious about achieving SDG 2030 which speaks to healthy lives and the promotion of well-being for all at all ages before year 2030 (UN, 2015; UNDP, 2015). The reduction in the neonatal mortality rate cannot be overemphasized. The researcher is of the opinion that by



developing relevant strategies to ensure effective implementation of early KMC guidelines into the mainstream of all the healthcare systems, reduction in the high neonatal mortality rate will be achieved. This study is timely and apt in Edo State.

### **1.2.3 Problem Statement**

KMC has been established as a safe and effective method of infant care, with the potential for improving the survival of LBW infants, especially in low-and-middle income countries (LMIC) that lack the financial resources to provide incubators. They provide warmth for the babies to mediate the effect of hypothermia that results from lack of subcutaneous tissue among other factors (Blencowe, et al, 2012a). Many education and training efforts have been explored and employed by some countries, including Nigeria (Aboda & Williams, 2012). Some countries are reportedly having difficulties in increasing their coverage and implementation of KMC beyond the initial programme set up by organised bodies like the WHO, UNICEF and Save the Children initiative (Aboda & Williams, 2012; NAS, 2009; Bergh, Charpak, Ezeonodo, Udani, & van Rooyen, 2011). Individual institutions still have difficulties in getting KMC institutionalised as policy or to maintain it in a sustainable way (Davanzo et.al, 2013). This has resulted in an ad hoc implementation. In addition, the researcher had observed that KMC has not expanded beyond the teaching hospitals despite the fact that majority of the births take place at the PHCc where there is a dearth of paediatricians.

Literature highlights the role of neonatal nurses in the implementation and care of preterm infants using KMC (Nyqvist et al., 2010). Health workers at all the levels especially those working in the maternity and neonatal areas have important roles to play in the achievement of the Sustainable Development Goals (SDGs 2030) which has now replaced the MDGs

especially goal 3 which is related to healthy lives and the promotion of well-being for all at all ages. Edo State has adopted the WHO (2003) KMC policy guidelines into several of its maternal and child health policies. However, the implementation is observed to be poor or non-existent in health facilities. It is instructive to remark that the document in question may be regarded as an oral intention because the researcher was unable to obtain a copy throughout the study. Even in facilities where KMC is practiced, nurses still need to be prompted to initiate KMC and get the consent of the doctors who are few and in many instances unavailable.

Reports of studies from Australia and South Africa, indicates that neonatal nurses had positive attitude and good practice of KMC, but had some knowledge gaps (Chia, Sellick & Sharon, 2006; Solomons & Rosant, 2012). However, the knowledge, attitude, practice and the challenges nurses experience with the implementation of KMC guidelines in health care facilities in Edo State is not clear. Neither are the attitude and challenges of administrators with regard to KMC implementation known. Furthermore, limited documented evidence exists on cultural issues related to KMC uptake and its challenges by parents in Nigeria and Edo State in particular. If these problems are known, suitable solutions can be proffered to lead to the uptake and implementation of early KMC practice. This study therefore sought to develop strategies to enhance early implementation of KMC guidelines in health facilities in Edo State.

#### **1.2.4 Significance of the Study**

Neonatal mortality can be reduced if KMC guidelines are implemented by the NICN and the parents of preterm infants (WHO, 2003). Other far-reaching measures such as prenatal care, early booking and good antenatal care as well as recognition and treatment of conditions that

predisposes to prematurity helps to achieve this feat (Onayade, Sule & Elusiyan, 2005). The timely implementation of strategies are key to meeting their set goals and objectives. Given the positive impact of KMC on preterm and LBW infants, the motivation for this study was to develop strategies that will enhance the early implementation of its guidelines in healthcare facilities, irrespective whether private or public and the level of care. The significance of this study cannot be overemphasised and would be useful in the following areas:

It will enable the parents of preterm infants on discharge from the healthcare facility have the confidence to continue to care for their preterm infant at home. This is based on the assistance and cooperation received from health workers which is tailored to their peculiar circumstances, context and available resources.

Also, the developed strategies have the potential of benefitting OHWs who may have difficulties initiating and providing KMC which is a new concept especially to those who graduated before the late 1990s. This is the period before its adoption as a child care practice as well as its inclusion in the nursing and midwifery curriculum. It will improve the operational health workers knowledge, attitude and confidence in the course of performing their duties of care. They shall be sufficiently mobilised and prepared to implement the findings related to strategies for the early implementation of KMC guidelines.

The study has the potential to contribute to the knowledge base of nursing practice, because it may serve as a reference point for nurses in the Neonatal Intensive Care Unit (NICU) and maternity units. An institution's policy adoption and implementation of the study's recommendations may lead to a reduction in the neonatal mortality of such an institution.

Furthermore, the study is important to midwifery education and practice because it may provide the needed expertise and confidence required from the midwife in the 21<sup>st</sup> century to function independently to reduce neonatal mortality rate.

In the light of the above, findings shall also contribute to the knowledge base of nursing practice in the sense that strategies shall serve as a reference point for nurses in the care of preterm babies. Results from this study can also be incorporated into the Midwifery curriculum to enhance the training of midwives and prepare them adequately for clinical practice and research in preterm and LBW infants.

In view of the rigor intended in the study, it can be replicated for use in any healthcare facility practicing KMC in Nigeria and by those yet to do so.

Finally, it will inform policy initiatives on the adoption of a KMC comprehensive programme at all levels of healthcare in Edo State in particular and Nigeria in general.

### **1.2.5 Research Questions**

The following research questions were formulated to provide answers to the problem statements above:

1. What are the knowledge, attitudes and practice of operational health workers regarding KMC guidelines in Edo State, Nigeria?
2. What are the challenges faced by operational health workers in the implementation of early KMC guidelines in Edo State, Nigeria?
3. What are the attitudes of administrators towards the implementation of KMC guidelines in health care facilities in Edo State, Nigeria?

4. What challenges do administrators face in the implementation of KMC guidelines in healthcare facilities in Edo State, Nigeria?
5. How do social-cultural practices affect KMC uptake by parents of preterm and LBW infants in Edo State, Nigeria?
6. What are the challenges faced by parents in the uptake of KMC in Edo State?
7. What solutions do operational health workers, administrators and parents of preterm proffer for early KMC implementation guidelines in healthcare facilities in Edo State, Nigeria?
8. What strategies can be developed to enhance early KMC implementation guidelines in any healthcare facility in Edo State, Nigeria?

#### **1.2.6 Purpose of the Study**

The purpose of the study is to develop strategies to enhance implementation of early KMC guidelines in healthcare facilities in Edo State, Nigeria.

#### **1.2.7 Objectives of the Study**

To achieve the purpose of the study, the following specific objectives were formulated:

1. To explore the knowledge, attitude and practice of operational health workers in Edo State, Nigeria regarding KMC guidelines.
2. To describe the challenges faced by operational health workers in the implementation of early KMC guidelines in Edo State, Nigeria.
3. To describe the attitude of administrators towards the implementation of early KMC guidelines in healthcare facilities in Edo State, Nigeria.
4. To describe the challenges faced by administrators in the implementation of early KMC guidelines in Edo State, Nigeria.

5. To explore the effects of social-cultural practices on KMC uptake by parents of preterm and LBW infants in Edo State, Nigeria.
6. To explore the challenges faced by parents in the uptake of KMC in Edo State, Nigeria.
7. To describe the solutions proffered by OHWs, administrators and parents of preterm infants for the early implementation of KMC guidelines in health facilities in Edo State, Nigeria.
8. To develop strategies to enhance the implementation of early KMC guidelines in any healthcare facility in Edo State, Nigeria.

#### **1.2.8. Research hypotheses**

The following hypotheses were formulated to guide the study:

H<sub>0</sub>: There is no significant relationship between knowledge, and attitude of OHWs and the practice of KMC in healthcare facilities in Edo State, Nigeria.

H<sub>1</sub>: There is a significant relationship between knowledge and attitude of OHWs and the practice of KMC in healthcare facilities in Edo State, Nigeria.

#### **1.2.9 Operational Definition of Key Concepts**

**Administrators:** This concept is used to denote ward/unit managers and hospital administrators who are charged with additional responsibilities of supervising OHWs and managing the wards, units and /or the whole hospital.

**Experts:** Persons who have special skills or knowledge in a particular field. The term is used to denote key persons who are knowledgeable and experienced in neonatal and administrative issues especially those that pertain to KMC.

**Guidelines:** A document with the aim of guiding decisions or principles put forward regarding future actions. It contains a detailed plan or explanation to guide actions in setting standards or determining a course of action. It seeks to streamline a particular process according to set routine or sound practice (Thesaurus, 2002). In this study, guidelines denotes the KMC practice guidelines as prescribed by WHO (2003) for all countries from which to formulate policies, protocols and training manuals for use in health facilities rendering maternal and neonatal care services.

**Healthcare Facilities:** Healthcare institutions are any approved and licensed health care facility by the Federal Government of Nigeria or that of Edo State to render maternal and child care services in Edo State, Nigeria. It could be private or public owned tertiary, secondary, PHC or a unit in an established health facility.

**Operational Nurses:** Nurses certified and licensed by the Nursing and Midwifery Council of Nigeria (NMCN) to practice general nursing, midwifery, neonatal and public health nursing in Nigeria. They are referred to as operational health workers (OHWs) based on the roles assigned to them in the day-to-day operations in the maternity and public health units. The public health nurses provide health education to mothers in the outpatient clinics and wards as well as do follow-up care on discharged neonates; while the neonatal care nurses care for the neonates and provide information and psychosocial support for the parents of the neonates whose babies are in the NICU. They possess at least two years post qualification work experience.

**Kangaroo Mother Care (KMC):** This is a standardised, protocol-based care system for preterm and/or LBW infants. In this care, there is skin-to-skin contact between the preterm baby and the mother both in hospital and after discharge until at least the 40<sup>th</sup> week of

postnatal gestational age ideally with exclusive breastfeeding and proper follow-up (Ludington-Hoe, 2013).

**Neonatal hypothermia:** An abnormal thermal state in which the new-born body temperature drops below 36.5<sup>0</sup>C (97.7<sup>0</sup>F) (Kumar et. al, 2009).

**OHWs:** These are the nurses working in the neonatal unit and the public health nurses or midwives who are have not attained managerial level but carry out daily tasks of caring for the clients' needs and treatment.

**Parents:** This denotes the biological mother and father of preterm infants “and grandmother” who will be responsible for providing skin-to-skin care for the premature or LBW infant.

**Preterm births:** This refers to babies born before 37 completed weeks of gestation. It could be further divided into moderately preterm (33 to 36 completed weeks of gestation), very preterm (<32 weeks) and extremely preterm (<28 weeks) (WHO, 2012b).

**Strategies:** These are carefully designed, comprehensive, futuristic, purposeful and well-thought out plans of actions directed towards achievement of a goal intended to outwit an opponent or competitors in a competitive environment. It describes how goals will be achieved by stating resources needed, process of formulation and specific instructions on what to do to achieve its implementation (Mintzberg, 1987; Thesaurus, 2002).

In this study, strategies are carefully designed plans of action created in conjunction with experts in the field of neonatology. The aim of the plan is to improve the uptake and facilitation of KMC guidelines by the hospital management, OHWs and parents of preterm infants in Edo State, Nigeria in order to reduce neonatal mortality rate



**TQM:** is a comprehensive people-focused management system that involves employees at all levels, and continually aims to improve the quality of processes, products and services (Tenner & De Toro, 1992).

### **1.3 PARADIGMATIC PERSPECTIVE**

“Paradigms are sets of beliefs and practices, shared by communities of researchers, which regulate inquiry within disciplines” (Weaver & Olson, 2006:459). It is the way the researcher views the world and perceive a particular phenomenon or the object of investigation (Burns & Grove, 2009). It serves as a thinking frame for the researcher in the process of developing knowledge by guiding the researcher’s behavior. The paradigmatic perspective is thus the collection of meta-theoretical, theoretical and methodological assumptions that guide the research process (Wahyuni, 2012).

#### **1.3.1 Researcher's Assumptions**

Researchers’ assumptions are considered as paradigms or worldviews that functions as a set of basic beliefs (or metaphysics) and deals with ultimate or first principles that guide a study. It represents a standard that defines for its holder, the nature of the "world, the individual's place in it and the range of possible relationships to that world and its parts”(Bok, 1978 in Guba & Lincoln, 1998:107). The standards are components of basic beliefs that guide all the ideas, logical proposition and the thoughts of the researcher which directs the sequential steps of the research study (Botes, 1992).

In this regard, the researcher’s assumptions are based on the following dimensions: ontology, epistemology and research methodology which are discussed below;

### **1.3.2 Ontological dimension**

Ontology is defined as the reality under investigation. The ontological dimension in the context of research pertains to the researcher's beliefs about the nature, form, structure and status of a phenomena, as well as the reality which is being investigated, or the research domain (Denzin, & Lincoln, 2011:97).

The researcher's worldview in this study is that of pragmatism. From the pragmatist's point of view the world is an ever-changing place, reality is what is actually experienced. It is oriented 'toward solving practical problems in the real sense of the issues at hand (Johnson, Onwuegbuzie, & Turner, 2007). For the pragmatist, objectivity is based on the fact that reality is constantly changing hence learning is best achieved through applying our experiences and thoughts to problems as they arise. The concern is about what works and solutions to the problem instead of emphasising on methods. Objectivity and subjectivity go hand-in-hand which allows a mixture of approaches for the researcher to understand a phenomena (Wahyuni, 2012). Truth is what presently functions while goodness is what is accepted by public test. Change is accepted openly and new ways to expand and improve society is continually sought. There is no absolute and unchanging truth, but rather, truth is what works; thought ought to produce action, rather than linger in the mind. Pragmatist researchers favour working with both quantitative and qualitative data because it enables them to better understand social reality. Hence a variety of approaches are used to understand a problem (Wahyuni, 2012).

Reality in the context of this study is concerned with what works and leads to solutions to the problems. Hence the researcher applies a mixture of objectivist and subjectivist ontology to understand the social phenomenon as aptly recommended by the pragmatist school of thought. This allows for a choice of methods, techniques and procedures to suit the need of

the study (Creswell & Clark, 2007; Wahyuni, 2012). The ontological assumption of the subjectivists is that the problem of reality is socially constructed by the researcher's involvement in the research circumstances which implies that the researcher, those individuals being researched and the reader interpret information differently. In contrast, the objectivist advocates that the researcher adopts a distanced, detached, neutral and non-initiative position from the researched (Wahyuni, 2012) . In this study, the researcher believes that a combination of these two world views would make for a better understanding of the phenomena under investigation.

The four paradigm components that are associated with these dimensions are: man, health, environment and nursing.

#### **i. Man**

The researcher maintains that man is a living being that resides in an environment. The environment could be physical and contextual in terms of socio-cultural dimensions and policies, or internal in terms of possessing a mind, body, soul and spirit. She also believes that knowledge is not static and that perception can change at any time and influence behavioural change of previously held beliefs.

Man in this study are, the OHWs, the unit managers, hospital administrators, parents of preterm babies as well as the Delphi experts and panellists. Each of these individuals are viewed as holistic beings that function in an interactive and integrative manner with the internal and external environments of an organisation. Hence the solutions they proffer to mediate the challenges encountered are taken very seriously because man's experiences, perceptions and attitude form the basic pillar to which the issues that plague the mind are mediated or solved. The solution to man's problems are built on trial and error (Heylighen,

1993). Thus by viewing health issues from the perspective of those directly involved based on context and challenges, the researcher allows participation in problem solving. She does not view the participants as passive recipients to an identified solution to a problem. Consequently, a participatory approach to problem solving is explored.

The hospital administrators and unit managers are believed to seek a common goal that is geared towards enhancing the survival of the preterm infants. This is done by lending support to strategies and policies aimed at empowering the OHWs and parents of preterm infants with the necessary knowledge and facilities aimed at meeting the health needs of the people of Edo State in particular and Nigeria in general.

## **ii Health**

Health is a state of complete physical, emotional, social, and intellectual well-being of the OHWs, unit managers, hospital administrators and parents of preterm infants of whom the degree of their internal wellness depends on their knowledge and interaction with their external environment. The well-being of individuals is determined by the interaction between their internal (body, mind and spirit) and external (physical, social and spiritual) environment. Health changes as the internal and external environment of man changes, causing health to vary between optimal and minimal health.

Furthermore, health is regarded as the state of affairs that help the NICN, parents of preterm infants and hospital managers /administrators to render their duty of care to preterm babies in any health facility in a manner that is acceptable to them – culturally and globally with positive outcomes on the preterm infants. Therefore, in order to be in good health, man should be involved in making decisions concerning his environment. The level of health and

wellness changes as one is able to appreciate and manipulate resources which could be physical, material and human interactions in the external environment to his or her advantage.

In this study, health is the ability of man to pursue and fulfill their daily routine and purposes by effectively utilizing practical and verifiable scientific skills to solve problems relating to health. To be adjudged healthy, man should have the ability to interact and proffer solutions to the cause of a health problem. These could be physical problems in the immediate environment or some subjective issues of the mind that cannot be visualized and which may lead to emotional stress. The strategy to meet the changing needs of the healthcare system and contribute to the improvement of the quality of neonatal health of the Nigerian people is not beyond the reach of those whose primary responsibility it is to make policies available and workable. The researcher believes that if these strategies are implemented, a lot would be achieved to mediate the plight of parents of preterm infants.

### **iii. Environment**

Environment is the totality of the geographical and sociological location of a phenomenon. Environment, in this study, is the healthcare facility and the social factors that are in operation where KMC is practiced. The environment and man are in constant mutual interaction, influencing and effecting change on each other. It is made up of the internal (vision, mission, principles, policies and programmes) and external (socio-cultural values, equipment and facilities, everyday work life, colleagues and patients) (Lokanadha & Mohan (2010). It encompasses the quality of work life of employees and the emerging dimensions thereof. These environmental factors are constantly influencing the OHWs as they interact with them on a daily basis. In this environment, the OHWs and the administrators attempt to meet the clients' expectations, by utilising the current knowledge and skills in taking care of

preterm babies by the application of modern and validated procedures and treatment. This is made possible by the social support and good working relationship among the staff, parents and hospital management in the form of a good communication process and role delineation, up-to-date information and training workshops and seminars, availability of equipment and sundry consumables to mention but a few.

#### **iv. Nursing**

Nursing encompasses the autonomous and collaborative care of individuals of all ages, families, groups and communities, sick or well and in all settings (ICN, 2002). It is both the art and science of promoting and maintaining health and caring for the individual—sick or well. The term ‘nursing’ implies a goal-directed and dynamic interaction between a person who has the necessary knowledge and skills in nursing and persons needing skills to ensure an optimum level of health according to their needs and requirements at primary, secondary and tertiary levels of healthcare. The environment in which the nurse and the nursing activity takes place could be health promoting or illness inducing; hence the nurse has to modify them (internal and external) to the clients’ and her own advantage.

The researcher views nursing as the activities that OHWs and administrators undertake to ensure the early implementation of KMC guides in health facilities is efficient for the overall benefit of preterm babies and their parents. These activities could be ensured through adequate preparation of/and manpower development, provision of facilities and awareness creation with the external environment.

### **1.3.3 Epistemological Dimension**

Epistemology is a branch of philosophy that deals with the study of nature and scope of knowledge (Heylighen, 1993). It is the beliefs on the way to generate, understand and use the

knowledge that is deemed to be acceptable and valid. It asks questions such as, “how do human beings know what they think they know?” (Schultz & Meleis, 1988:218). It is aimed at determining the relationship between reality or the known world, and at the researcher for the purpose of generating research findings that are valid and accurate (Denzin & Lincoln, 1994). There are three major forms in which philosophers believe knowledge can be created namely, positivism, constructivism and pragmatism.

This study is anchored in the pragmatism school of thought. For the pragmatist, the method of knowing is based on mixed methodology (Wahyuni, 2012). It is argued that, knowledge consists of inborn categories or cognitive structures that attempt to represent the environment in such a way as to make problem-solving easy. Because no single model can hope to capture all relevant information, multiple models are considered. Hence the existence of different and parallel models, even though they may seem contradictory will be accepted (Heylighen, 1993). Pragmatism has gained considerable support as a stance for mixed methods researchers (Johnson & Onwuegbuzie, 2004). Pragmatists like constructivists, are of the belief that theory and practice are interlinked, and that practice exists both before and after theory (Mir & Watson, 2000). Therefore, it lends itself to both quantitative and qualitative methods of investigation because it is oriented towards solving practical problems and gains answers to research questions. The researcher and the objects of investigation interact to build knowledge together. These findings are refined and reformed until consensus is reached (Denzin & Lincoln, 1994).

In this study the researcher assumes the stance of the pragmatist because she believes that the object of investigation though different in social reality can be investigated by applying different methods working in conjunction with each other. The researcher sees health workers

and other healthcare professionals as colleagues who can help to proffer solutions to the high neonatal mortality rate in Edo State through the early implementation of KMC guidelines. This can be achieved by exploring their knowledge, attitudes, practices, challenges and possible solutions through a quantitative approach. The researcher in like manner tries to distance herself from solutions to the problem by using a qualitative approach to explore some aspects of the study which allow her to be immersed and understand the reality from the perspective of the subjects without interfering with data (Wahyuni, 2012).

In this study, the empirical aspect of the strategies to enhance early implementation of KMC guidelines was explored through the conceptual framework of the health policy analysis triangle of Walt & Gilson (1994). This framework was employed to access the knowledge, attitudes, practices and challenges faced by OHWs, the administrators and parents of preterm infants. The conceptual framework has four dimensions; actors: (OHWs, administrators and parents of preterm infants); the process: (KMC implementation assessment through different data collection techniques); content: (the KMC policy guidelines) and the context: (Edo State, Nigeria). The study population fit the purpose of investigating the KMC concept and its applicability and use.

The health policy analysis triangle is a simplified framework used globally to evaluate policy process and implementation in health and allied industries (Walt & Gilson, 1994). The goal of the application of the health policy analysis model is to empirically investigate the knowledge of key elements and variables which are important to the understanding of policy implementation in the healthcare delivery system. It is used to highlight actor's involvement in policy making, implementation and evaluation with all the key factors (context, process and content) deserving equal attention. These factors are interwoven and can be considered



systematically in order to achieve a holistic framework (Walt & Gilson, 1994). However, the policy-making aspect was not addressed in this study. The content of the Nigerian health policy, as well as the staff complement and qualifications were excluded from the exploration. Same with the patients' turnout and availability of institutional resources and evaluation of the programme since the aim of the study does not require resource verification. The study site is an approved KMC centre in a tertiary health institution which is expected to be well-funded in terms of human and material resources.

A detailed description of this is provided in chapter two.

#### **1.3.4 Theoretical assumptions**

Based on the pragmatic world view, the researcher adopted the health policy analysis triangle and the TQM as the conceptual and theoretical foundations for this study. The quality of the developed strategies was further assured by the application of the Delphi technique of experts' and panelists' opinion for consensus building.

#### **1.3.5 Methodological Dimension**

Research methods refer to the set of procedures, tools and techniques, including data collection method and analysis employed by the researcher to "know the world" or gain knowledge of it. In other words, it refers to strategies used to acquire knowledge in research, and encompasses techniques and data analysis (Howell, 2013).

The researcher believes that knowledge is created by individuals and groups based on their perceptions and experiences in the internal and external worlds which are truth to them at a given time. These perceptions may change, as their understanding broadens with more information; or as factors in the internal or external world bring about changes to influence or affect each other.

## **1.4 RESEARCH DESIGN AND METHODOLOGY**

Research is a systematic process of verifying knowledge based on the researcher's assumptions of knowledge verification which is contextual and based on objectives (Botes, 2006:3). To the researcher, knowledge creation is based on philosophical reasoning, practice and theory used to verify knowledge (Denscombe, 2008). Hence the study used a multi method research approach (MMR) following a concurrent exploratory design. This method involves collection of both quantitative and qualitative data for a study during the same time or period (Creswell, 2008:14).

Data are collected simultaneously or concurrently; the reason however was not to determine convergence or differences but to answer different research questions. The multi method research approach was the best fit for the study because it enabled the researcher to do a broad survey and understand the problems of KMC uptake by using a multidimensional approach to investigate the different populations.

### **1.4.1 Phase 1: Problem Identification**

This phase was the first stage of the study which can be best described as the problem identification stage of the study. The researcher was able collect data from the operational health workers and the administrators to enable insight into the problems they encounter in the implementation of KMC.

The researcher was able to collect objective, impersonal data from the OHWs and administrators by means of the quantitative approach (questionnaires). Moreover, the researcher opines that these groups of persons are known to be too busy to align themselves with other methods of data collection such as an interview or focus group discussion. In addition, the neonatal intensive care environment is highly structured and tolerates only minimal interruptions. On the other hand, the qualitative approach allows for rich (subjective)

personal data collection to explore the effect of socio-cultural practices on the uptake of KC by the mothers of preterm infants because a deep insight into their knowledge, experiences and cultural practices affecting KMC uptake is required from the respondents' perspective by means of a structured-quantitative, unstructured/semi structured qualitative interview guide. This cannot be captured adequately by the quantitative approach. Furthermore, some mothers may not be literate enough to fill out a questionnaire.

In order to navigate the busy environment in the NICU and not create some form of distraction, the researcher used the concurrent exploratory design which entailed giving out separate questionnaires to the OHWs and the administrators, and during the same period scheduled and obtained consent to conduct a structured interview with mothers of preterm infants. The reason for combining both quantitative and qualitative data is to better understand the research problem by converging both quantitative and qualitative data during data analysis in order to get a picture of the issues under investigation for corroboration or confirmation. The quantitative and qualitative data are weighted equally as both are collected concurrently from different respondents even though the study is exploring similar concepts on the same issue but from different perspectives. The result of one is not dependent on the other nor does one data set influence the other one in any way. Integrating the two data bases entail merging and transforming the qualitative themes into counts and problems identified and conclusion statements. This data are compared by using descriptive quantitative analysis during the data analysis and interpretation section of the study.

#### **1.4.2 Phase 2: Strategy Development**

According to Pearce and Robinson (2000:25) strategy formulation guides the managers in defining their core business, the end it seeks and the means it will use to accomplish that end'. A predetermined strategy by the manager, helps to understand the environment and

foresee the forces that could negatively impact the business. Thus are modalities are put in place to mediate them.

In this study, the intended strategies, will guide the hospital administrator, managers and the OHWs at the health facility in defining their core business, which is the proper management of the KMC programme, with the intension of maximizing service delivery through policy implementation.

The strategic formulation design used in this study is the one recommended by Pearce and Robinson (2000:12). The components of the strategy includes organisations' mission, internal analysis, external environment, strategic analysis and action plans and short-term objectives, functional tactics, policies that empower action, restructuring, re-engineering and refocusing the organisation, strategic control and measures taken to promote continuous improvement. However, the organisations' mission and environments were not analysed but accepted as good since the study site is a tertiary federal government-funded institution that has its own mechanism of assessment by statutory bodies. This, coupled with the total quality management (TQM), was adopted by the researcher to focus on the vision, mission, values and principles, goals and objectives and action plans. The formulated actions were further subjected to quality assurance for its authenticity and applicability through the Delphi process.

The researcher adopted the Delphi Technique of obtaining consensus to develop strategies following the TQM process that identified problems in the KMC implementation from the conclusion statements and inductively and deductively from the analysis of data.

A summary of the methodological processes in Phase one and two of the study is presented in Table 1, while detailed information is provided in chapter 3.

**Table 1.3.5: Methodology Summary Table**

			<b>PHASE 1</b>			
<b>Research Objective</b>	<b>Approach &amp; design</b>	<b>Population</b>	<b>Sampling</b>	<b>Data collection</b>	<b>Data Analysis</b>	<b>Rigour</b>
1. To describe the knowledge, attitude & practice of the OHWs regarding KMC guidelines in healthcare facilities in Edo State, Nigeria.	Quantitative: Exploratory Survey Design	OHWs (N=55)	All inclusive (One facility) n= (55)	Questionnaire	1.Descriptive statistics 2. Deductive content analysis.	Reliability & validity of the questionnaire. A. Reliability: Cronbach Alpha Co-efficient B. Validity i. Content ii. Face iii. Construct
2. To describe the challenges faced by OHWs in the implementation of early KMC guidelines in healthcare facilities in Edo State, Nigeria.	Quantitative: Exploratory Survey Design.	OHWs (n=55)	All-inclusive facilities:1 n=(55)	Questionnaire	1.Descriptive statistics 2.Deductive content analysis	Reliability: Cronbach Alpha Co-efficient Validity i. Content ii. Face iii. Construct.

3. To describe the attitude of administrators towards the implementation of early KMC guidelines in health care facilities in health care facilities in Edo State, Nigeria.	Quantitative: Exploratory Survey Design.	Hospital Administrators (n=4)	Purposive sampling(n=4)	Questionnaire.	Descriptive statistics	Reliability: Cronbach Alpha Co-efficient Validity: i. Content: ii. Face iii. Construct
4. To describe the challenges faced by administrators in the implementation of early KMC guidelines in health care facilities in Edo State, Nigeria.	Quantitative: Exploratory Survey Design,	Hospital Administrators (n=4)	Purposive sampling (n=4) All-inclusive method.	Questionnaire (Different questionnaire was constructed for the administrators).	Descriptive statistics.	Reliability: Cronbach Alpha Co-efficient Validity: i. Content: ii. Face iii. Construct
5: To explore the effects of social cultural practices on KMC uptake by parents of preterm and LBW infants in Edo State, Nigeria.	Qualitative: Exploratory Design.	13 mothers of pre-term babies N=13	Purposive sampling (n=13)	Semi-structured interview guide.	Inductive content analysis.	Trustworthiness: truth value, applicability, consistency, neutrality, theoretical and inferential validity of the study a. Conformability: 1. Proper definition & cross checking of codes b. Credibility 1. Present negative or discrepant information

						<p>that runs counter to the themes.</p> <ol style="list-style-type: none"> <li>2. Clarify the researchers' bias;</li> <li>3. Prolonged time in the field.</li> <li>4. Transferability: Use rich, thick description to convey the findings</li> </ol> <p>Validity:</p> <ol style="list-style-type: none"> <li>1. Data triangulation from different sources;</li> <li>2. Peer debriefing to enhance the accuracy of the account.</li> <li>3. Member checking to determine the accuracy of the qualitative findings.</li> <li>4. Use of external auditor to review the entire project.</li> </ol>
6. To explore the challenges faced by parents of preterm babies in the uptake of KMC in Edo State, Nigeria.	Qualitative: Exploratory Design.	13 mothers of pre-term babies (N=13)	Purposive sampling (n=13)	Semi-structured interview guide.	Inductive content analysis	<p><b>SAME AS IN 3 ABOVE</b></p> <ol style="list-style-type: none"> <li>a. Conformability (ability to interpret and make sense out of the study from the stand point of the participants).</li> <li>b. Dependability: data consistency and usability, truthfulness</li> </ol>

						of the data collected and analysed. c. Credibility: correct procedures for interviews & audiotapes recordings; neutrality of the researcher during the interviews and careful handling of the emotional expressions. d. Transferability: presenting a ‘thick’ description of the participants, context & member checking.
7. To describe the solutions proffered by OHWs, administrators and parents for early implementation of KMC guidelines in health care facilities in Edo State, Nigeria.	Quantitative: Exploratory Survey Design.	OHWs, parents and administrators (n=59)	All inclusive: n=59	Questionnaire	Descriptive statistics	a. Conformability b. Dependability c. Credibility d. Transferability



			PHASE 2			
Research Objective	Approach and design	Population	Sampling	Data collection	Data Analysis	Rigour
8. To develop strategies to enhance the early implementation of KMC guidelines in healthcare in Edo State, Nigeria.	Delphi Method: Quantitative: Exploratory Survey Design.	1. Evidence from phase 1: objective 1-7.  2. 10 panelists in the field of neonatology, O&G & some stake holders (N=10).	1. Evidence from phase 1: objective 1-7.  2. Purposive sampling. (n=10)	1. Evidence from phase 1: objective 1-7  2. Self-administered Questionnaire.	1. Inductive and Deductive reasoning.  2. Descriptive statistics.	1. Truth value, applicability, consistency, neutrality, theoretical validity and inferential validity of the study  2. Reliability & Validity of the questionnaire. <b>A. Reliability:</b> Cronbach Alpha Co-efficient <b>B. Validity:</b> i. Content/face ii. Criterion iii. Construct

## **1.5 OUTLINE OF THE THESIS**

*Chapter 1:* Orientation to the research study.

*Chapter 2:* Literature review.

*Chapter 3:* Research design and methods.

*Chapter 4:* Quantitative results and discussion.

*Chapter 5:* Qualitative results and discussion.

*Chapter 6:* Development of strategy for improving the early KMC in healthcare facilities in Edo State, Nigeria.

*Chapter 7:* Evaluation of the study, limitations, and recommendations for practice, education, research and policy.

## **1.6 SUMMARY**

This chapter briefly outlined the major issues that are addressed by the study with an introduction to the background of the problem and the rationale for the study. The research questions and objectives, the significance of the study and definition of concepts were also highlighted. Finally, the researcher's assumptions with regard to the ontological, epistemological and methodological dimensions were discussed, and a brief overview of the design and methodology used in this study was presented.

## CHAPTER TWO

### LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

#### 2.1 OVERVIEW OF CHAPTER

This chapter provides an overview of studies done on KMC as a method to reduce neonatal mortality and to critically appraise current and relevant knowledge for development of guidelines that will be acceptable in the Nigerian context and Edo State in particular. The review is divided into four parts; section 1 addresses prematurity and its causes. Section 2 describes the concept of KMC, its history, principles and guidelines as well as the global, national and regional uptake of KMC and its challenges. Section 3 addresses the knowledge, attitude, practice and effect of socio-cultural on KMC. Section 4 highlights the conceptual framework and concludes with the identified gap in literature and a summary of the chapter.

#### 2.2 SEARCH STRATEGY

The literature review was conducted by searching books, dissertations, theses, the World Wide Web (Google, Google Scholar), the South African Journal Database System, or SA ePublications, and the International Journal Database Systems, Science Direct and EBSCO Host (Academic Search Premier, CINAHL, ERIC, Health Source: Nursing/Academic Edition, MasterFile Premier, MEDLINE, Pre-CINAHL, PsychINFO, SociINDEX with Full Text, Humanities International Complete, Academic Search Complete and Education Research Complete).

A broad combination of keywords was used to search the literature on the topic. The following English keywords were combined in varying sequence and searched in the categories of "All" or "Title" or "Abstract" or "Author-Supplied Abstract" or "Keywords": (Kangaroo Care\* or Kangaroo Mother Care \* **and** (Neonatal Care\* or Neonatal Practices\*) **and** (Strategy

formulation\* or Strategia\*) **and** (Quality Improvement\*) **and** (Health care\* or Health Service\*).

### **2.3 PREMATURITY AS A CAUSE OF NEONATAL MORTALITY**

Prematurity is birth occurring before the 37<sup>h</sup> week of gestation, while LBW are term babies weighing less than 2.5kg at birth (Lawn, Cousens, & Zupan, 2005; WHO, 2012a). Globally, about 28% of perinatal deaths are due to prematurity. Three quarters of all neonatal deaths occur during this period with over one million out of thirteen million children born before 37weeks dying annually during the neonatal period (UN, 2015). This scourge is more in developing countries in Africa and South East Asia as it contributes to about two thirds of neonatal mortality, but only 1% in the developed ones (UN, 2015). A global estimation in 2015 places preterm birth complications as second (14%) to pneumonia (18%) as leading causes of death in under-5 children in developed and developing countries (UN, 2015). The neonatal mortality rate though has fallen from 36 deaths per 1,000 live births in 1990 to 19 in 2015 and a decline from 5.1 million to 2.7 million was reported during the same period. The decline in rate is slower than that of post-neonatal U-5 mortality of 47 % compared with 58 % (Morakinyo & Fagbamigbe, 2017).

Though the cause of prematurity is unknown, a number of factors predisposes it which are classified as direct and indirect causes. Direct causes are attributable to maternal disease conditions or factors as well as foetal factors, while indirect causes are factors that relate to social or environmental problems (Blencowe et al., 2013).

### **2.3.1 Direct Causes of Prematurity**

Eclampsia is the occurrence of convulsions coupled with hypertension and proteinuria in pregnancy, while pre-eclampsia presents with signs of oedema and proteinuria prior to the full-blown condition. Eclampsia is also responsible for intrauterine growth restriction (USAID, 2008). Premature rupture of membrane (PROM), if not promptly attended to results in intra uterine infection or inflammation (Bhutta, 2012); while vascular disease, and over distension of the uterus as in multiple pregnancies is strongly implicated in preterm births. Other causes include a previous preterm births, a short cervical length and a raised cervical-vaginal fetal fibronectin concentration (Goldenberg et al., 2008).

### **2.3.2 Indirect Causes of Prematurity**

These are factors not directly related to the mother but whose presence has some negative outcomes on the pregnancy. A key issue amongst these factors is poverty; the role of financial enablement on the daily affairs of an individual cannot be overemphasised. Poverty and its related consequences such as the inability to access health services due to lack of funds, ignorance due to lack of information, teenage pregnancy and socio-cultural practices especially in LIC are major causes of lack of utilisation of health services (Kramer, Séguin, Lydon, & Goulet, 2000). A lack of financial resource creates barriers to accessing services and utilisation of information that would otherwise improve the health of the recipients.

If a health service is located far from the users it will be utilised less. The travel time and cost of transportation to the health facility are factors that adversely affect utilisation and in turn jeopardises the chances of survival of the preterm baby in emergency situations (Peters, Garg, Bloom, Walker, Brieger, & Rahman, 2008). These statements are in line with that of The Partnership for Maternal & Child Health (PMCH) which reports that poverty and access to

healthcare in developing countries especially Sub-Saharan Africa is one the greatest causes of neonatal mortality (USAID, MCHIP, MRC, 2015).

Ignorance and lack of formal education or non-availability of information is implicated as a cause of prematurity. Education was found to be a significant predictor of service utilisation in Nigeria (Babalola & Fatusi, 2009). This was supported by findings in the UK that posits that the health seeking behavior of an educated woman is directly related to the health of the family (Peters, Garg, Bloom, Walker, Brieger, & Hafizur et al., 2008). Even when healthcare is sought, the unavailability of skilled attendance at birth leads to poor pregnancy outcome especially in LIMC (Friberg et al., 2010; WHO, 2012b). Globally, studies agree unanimously on the role of the midwife or birth attendants during this crucial period in saving the life of the baby and mother (Disu, 2013; Renfrew et al., 2014). This change in approach to care “includes preventive and supportive care that works to strengthen women’s capabilities in the context of respectful relationships, is tailored to their needs, focuses on promotion of normal reproductive processes, and in which first-line management of complications and accessible emergency treatment are provided when needed” (Renfrew et al., 2014: 1129).

Other factors mentioned in literature as maternal predisposition to premature birth is low maternal body mass index (BMI) and race. A woman with low BMI often times do not possess the physical features and nourishment to carry pregnancy to term (Disu, 2013). A study in the USA reported non-Hispanic blacks as having a decreased risk for neonatal morbidity compared to other racial/ethnic groups (Shapiro-Mendoza et al., 2006). The above situation is in contrast to the Nigerian context where high neonatal and mortality rates are due among other variables to poverty and ignorance (Morakinyo & Fagbamigbe, 2017).

The problems of prematurity cannot be overemphasised as its adverse effects extends beyond the neonatal period (Nyqvist et al., 2010). Most neonatal deaths are caused by diseases that are readily preventable or treatable with proven, cost-effective interventions such as timely resuscitation at birth, clean cord treatment and thermal care (UNICEF, 2016; Wardlaw, You, Hug, Amouzou, & Newby, 2014) These simple and affordable methods have contributed immensely in the reduction of mortality which had previously stood 58% of all Under-fives (U-5s) globally but with a decline to 47% from 57% between 1990-2015 (Wardlaw et al., 2014).

In Australia, efforts aimed at short, medium, and long-term outcomes that could be improved by care within the scope of midwifery was adduced to reduce maternal and neonatal mortality and morbidity, reduced stillbirth and preterm birth, and improved psychosocial and public health outcomes (Renfrew et al., 2014). Similarly, early booking and recognition of factors that predispose to preterm birth was posited in Nigeria (Disu, 2013). In these studies, the authors recommended community-based interventions and health education to improve the knowledge of women and members of their families, as well as ensuring availability of skilled health personnel at all times. A decline in neonatal mortality rate can be achieved without the use of high technology which can be reached without the introduction of high technology medicine if countries have the political will to do so (Saugstad, 2011). KMC is an intervention to save the neonate in the event of a premature birth (WHO, 2003). This is one of the key recommendations for achieving goal three of SDG 2030 (UN, 2015).

## **2.4 THE CONCEPT AND HISTORY OF KMC**

Child care and neonatal care practices date back to historic times as man had always looked for shelter, heat and preservation of self from draught (Kumar, Shearer, Kumar, & Darmstadt, 2009). Hence, provision of warmth is adjudged as one of the key concept of neonatal care (Sanabria & Martinez, 1983). Although folklore associates increased temperature to fever or ill

health, hypothermia on the other hand is known to have adverse effects especially on the preterm baby as it is a major cause of mortality in the neonate after birth asphyxia (Rajab & Ghareba, 2013). Advances in neonatal care have impacted positively on the care of the neonates which informed the WHO to adopt thermal control among the Essential New Born Care components (ENC) to reduce mortality (WHO, 2010).

Incubators are used to provide thermal care in high resource countries, but the Low and Medium Income Countries (LMIC) still have financial challenges to provide incubators for every neonate that requires it, thus leading to an unabated increase in neonatal morbidity (Renfrew et al., 2014; Akinyemi, Bamgboye & Ayeni, 2015). Various studies have reported on KMC as an alternative to incubators to prevent neonatal mortality especially in infants weighing less than 2kg (Bergh, et al., 2011). Getting the mother and her infant in close continuous contact is the basic requirement for the success of the concept as it promotes breastfeeding as well (Sanabria & Martinez, 1983).

The term KMC is derived from similarities of how the animal named kangaroo takes care of its young. This animal cuddles its young in her bosom for warmth, protection and provides constant and regular breastfeeding for as long as the young desires (Nyqvist et al., 2010). This method of care is replicated in humans in the care of neonates by the mothers where the mother serve as “incubator” to maintain the infant’s body temperature and also serves as the main source of food and stimulation for the LBW infant until he/she is matured enough to face life in similar conditions as those born at term outside the uterus (Conde-Agudelo & Díaz-Rossello, 2014).

KMC was started in Bogotá, Colombia, in 1978 by Dr. Edgar Rey Sanabria, Professor of Neonatology and Dr. Hector Martinez at the Maternal and Child Institute of Bogotá, Colombia



(Charpak et al., 2005). The method was introduced to alleviate the shortage of caregivers, infant abandonment, and lack of resources such as incubators which resulted in a high rate of nosocomial infections and death because sick infants were made to share incubators with seeming well ones (Ludington-Hoe, 2013; Charpak et al., 2005). Dr. Sanabria and colleague then suggested that mothers have continuous skin-to-skin contact with their LBW babies to keep them warm and to give exclusive breastfeeding (EBF) as needed. This freed up the overcrowded incubator space, as well as care givers. They published their results in 1979 in Spanish which revealed a reduction in neonatal mortality in the hospital from 68% to 32% in the first year and used the term Kangaroo Mother Method (Sanabria & Martinez, 1983). "Kangaroo Mother Care" as a term was first defined at a meeting of some 30 interested researchers, attending a meeting convened by Dr Adriano Cattaneo and colleagues in November 1996 in Trieste, Italy together with the WHO represented by Dr Jelka Zupan (Nyqvist et al., 2010).

#### **2.4.1 When to adopt KMC**

There is no doubt that very small newborns and those with complications can best be cared for in incubators where they can receive the necessary attention and care where the resources are available (March of Dimes, PMNCH, Save the Children, & WHO, 2012). However, when the overriding gains of KMC are considered, the recommendations of experts in this aspect of neonatal care is that as “soon as the general condition of these babies (preterm & LBW) improves, and no longer requires intensive medical care, KMC be introduced” (Blomqvist, Frölund, Rubertsson, & Nyqvist, 2013:12).

The following list of recommendations applies to KMC adoption where there are no appropriate neonatal care facilities. KMC is proposed as the alternative to incubators in health

facilities. Similarly, where all levels of neonatal care are readily accessible, early mother–infant skin-to-skin contact in health facilities can enhance the quality of mother–infant bonding and promote successful breastfeeding. Where technical and human resources are of a high standard but are insufficient to cope with the demand.

#### **2.4.1.1 Guidelines and Principles for the Components in KMC Protocols**

The practice of KMC has become acceptable and embraced in all NICU globally even in developed countries with high technology and facilities because of the inherent advantages (Nyqvist, 2016). However, the supervision of KC between mother and baby requires professional skills for both nurses and medical NICU staff based on the stability of the healthcare facility to take into cognizance some specific guidelines based on peculiar context or environment (Davanzo et al., 2013; Chia et al., 2006). In order for the protocol to be effectively articulated for implementation, the components of the KMC principles created by USAID (2008) in partnership with John Hopkins international (Jhpiego), Save the Children and Programme for Appropriate Technology in Health (PATH) were integrated into the Maternal and New Born Comprehensive Health (MNCH) implementation package (Davanzo et al., 2013; USAID, 2008). The overall aim is to introduce, expand and strengthen KMC practices to improve survival of low birth weight and preterm babies.

*Guidelines:* These are distinctly explained in the WHO (2003) KMC practical guide. Facilities with intent to practice KMC should be abreast with this document, its training requirements and how to select babies for which KMC is suitable.

*Principles:* The global principles of KMC encompasses all intrapartum and postnatal care adhering to a policy of non-separation of infants and their mothers and families. KMC should

begin as soon as possible after birth and continue as often and for as long as appropriate depending on the prevailing circumstances (USAID, MCHIP, 2008).

#### **2.4.1.2 Variants of KMC**

The concept of KMC is a general term in neonatal care to which there are several and specific domains. Six variants of KMC approved and sponsored by USAID, Save the Children, Child & Maternal Integrated Programme (CHIP) and Medical Research Council were outlined by Ludington-hoe (2013):

- ❖ **Continuous KMC:** This entails prolonged skin-to-skin contact between a mother (and another caregiver, who may be the father or grandmother) and the baby for 24 hours per day. Appropriate support is provided by health workers, family and community members.
- ❖ **Intermittent KMC:** Refers to recurrent but not continuous skin-to-skin contact between mother and baby with the same support from health workers as in continuous KMC. It is practiced when the caregiver is unable or unwilling to practice continuous KMC in a health facility, or the baby is unstable. The periods of intermittent KMC can range from once to a few times a day over a number of days. An intermittent KMC session ideally ought to last for at least 65 minutes.
- ❖ **Facility-based KMC.** This is practiced at a health care facility which offers maternity and newborn services. It is initiated after the on-site birth of a baby or after admission of a baby born elsewhere.
- ❖ **The Post discharge KMC:** Also called ambulatory KMC, is when the mother and baby are discharged from the facility because the baby is stable, feeding and growing well. The mother would have been seen to demonstrate competency in caring for the baby on

her own. She promises to practice continuous KMC at home with an agreed-upon schedule for follow-up visits by the health worker.

- ❖ **Community-initiated skin-to-skin care:** This is the practice of continuous KMC being initiated by the healthcare provider and continued at home; it is also called community KMC. However, it does not necessarily link to the full package of supportive care. It is practiced in settings where referral to a health facility is challenging or not possible.
- ❖ **Skin-to-skin care (SSC):** This is commonly referred to as KMC. It is the method recommended for all babies immediately after delivery to ensure warmth. It is also a recommended method when transferring sick newborns to a health facility.

#### **2.4.2 Components of KMC**

As highlighted in the preceding section, all six variants of KMC have three major components: the KMC position, exclusive on-demand and early breastfeeding, early hospital discharge with appropriate follow-up and a last component now referred to as psychosocial support is currently inclusive.

##### **❖ The KMC Position**

The KC position is where “the infant is held in skin-to-skin contact (SSC) vertically between the mother’s breasts firmly attached to the chest and in-between her clothes”. The baby is held in this position for as long a period as mother and infant can tolerate (Strand, Blomqvist, Gradin, & Nyqvist, 2014). However, mother can share this role of providing SSC with others, especially the baby’s father or grandmother. The aim is to empower the caregivers and make them take responsibility for caring for the infant (Nyqvist et al., 2010).

Studies have reported the effectiveness of the hospital-based KMC as a method of preventing severe morbidity and mortality especially in LMIC (Aboda & Williams, 2012; Wardlaw et al., 2014). The intervention is inexpensive and feasible, and therefore strongly recommended for hospital settings. However, the use of the community-based component of KMC is not well reported in literature (Ahmed, Mitra, Chowdhury, Camacho, Winikoff & Sloan, 2011).

#### ❖ **Early breastfeeding**

This component entails frequent and exclusive or nearly exclusive breastfeeding (EBFD). It is to be noted that this component is often not considered as part of KMC (Moore, Anderson, & Bergman, 2009). Early breastfeeding ensures the infant's intake of colostrum is maximized, as well as to promote the establishment of lactation through the stimulation of prolactin production (Victora, Bahl, Barros, França, Horton & Krusevec et al., 2016). Hence an early initiation of breastfeeding in the first hour of life is promoted by UNICEF and WHO because it improves neonatal outcomes (Barros, Bhutta, Batra, Hansen, Victora, & Rubens, 2010). For preterm newborns, most of whom are unable to suckle until 34 weeks of gestational age or later, EBFD entails using a cup and spoon to administer expressed milk and is also regarded as total breastfeeding (Victora et al., 2016).

A review of breastfeeding benefits of KMC in Sweden reported that very preterm infants who were breastfed between one to six months spent more time on the mother's breast and thus feed longer irrespective of the amount of time or duration of KMC per day (Flackin, Ewald, & Wallin, 2011). However, a randomised controlled trial with long-term follow-up of LBW infants in Madagascar revealed that there was no difference between infants introduced to KMC immediately after birth and those introduced after a period of seven days in regards to risks ratio. However, the proportion of exclusively breastfed babies (EBFD) at 6 months post

birth was significantly higher with earlier KMC than later KMC (Nagai, Yonemoto, Rabesandratana, Andrianarimanana, Nakayama, & Mori, 2011).

#### ❖ **Early Discharge Component**

This component entails the early discharge from the health facility of the LBW infant who is still in the kangaroo position irrespective of gestational age. This is effected if the infant has overcome all the challenges of extra-uterine life. Discharge is recommended once the infant has gained 0.5gm/kg BW (Body Weight) in three consecutive days. It is imperative that the healthcare provider makes a strict follow-up by regular visits to ensure compliance (Nyqvist et al., 2010).

#### ❖ **Psychosocial Support.**

As with the early breast feeding component, the psychosocial support are less frequently identified as part of KMC (Valizadeh, Ajoodaniyan, Namnabati, Zamanzadeh, & Layegh, 2013). It is referred to as 'Kangaroo support'. The concept describes the physical, educational and emotional support that the mother and the family receives when KMC is being initiated and practiced (Valizadeh, Ajoodaniyan, Namnabati, Zamanzadeh & Layegh, 2013).

Preterm birth is stressful for members of the immediate family and sometimes leads to emotional trauma and feelings of inadequacy, especially for the mother. The health workers can help to mediate some of these problems by providing psychosocial support by means of information to the family, emphatic understanding of their current trauma, the provision of comfortable environment, as well as privacy to the parents (Bergh, Charpak, Ezeonodo, Udani & Rooyen, 2012; Nyqvist et al., 2010). This care influences the mother-infant relationship that empowers and equip the mother with the relevant knowledge to guide her to overcome her fears and concern regarding the safety and survival of the preterm/ LBW infant. It also helps

parents to overcome the grief and guilt suffered by inadvertently blaming themselves at times as being the cause of the preterm delivery (Charpak et al, 2005; Valizadeh, Ajoodaniyan, Namnabati, Zamanzadeh, & Layegh, 2013). Furthermore, the above-mentioned support helps parents to develop the right attitude and skills which translate into bonding with the infant very early in life as reported in a study in KwaZulu-Natal (South Africa). This study explored the benefits of psychosocial support in KMC. The results indicated that mothers were excited about the weight gain, and emotional calmness and tranquility were also observed in their preterm babies (Reddy & McInerney, 2007).

#### **2.4.3 Benefits of Kangaroo Mother Care**

The benefits of KMC to both mother and infant have been well-documented in literature (Nyqvist, 2016; Muddu, Boju, & Chodavarapu, 2013). Agreements universally on its benefits are in the area of weight gain and less crying as the mother as reported by mothers who practice skin -to -skin care. They affirmed that they are able to develop early cues to the infant's needs. Furthermore, respiratory and thermal regulation are reportedly enhanced in the neonate (Conde-Agudelo, Belizán & Diaz-Rossello, 2007; Moore et al., 2007).

##### **❖ *Benefit to the infant***

KMC has proven beneficial mortality reduction effects for babies weighing less than 2,000grams (Nyqvist et al., 2010). It is a successful practice put in place to reach all premature babies to help curb the high incidence of neonatal mortality (Aboda & Williams, 2011). Infant and maternal bonding and attachment occur due to early breastfeeding (Victora et al., 2016). It has positive effects on infant development and infant /parent interaction (Conde-Agudelo & Díaz-Rossello, 2014). Studies have also reported the enhancement of infant physiologic

stability and as well as reduction of pains and aids motor development as the neonates were found to cry less when in the KMC position (Moore et al., 2009).

❖ *Benefit to the mother*

Skin-to-skin contact between a mother and her infant reduces maternal stress and the incidence of postpartum depression (Johnson, 2004). It is cost-effective and accessible because it does not require complicated facilities. This in fact has been the primary attraction of KMC especially in low resource countries (Charpak et al., 2005). Mothers also report that it makes them feel closer to their child thereby facilitating bonding as well as increasing the likelihood of continued and successful breastfeeding (Conde-Agudelo & Díaz-Rossello, 2014). Furthermore, KMC reduces maternal postpartum depression symptoms and increases parental sensitivity to infant cues (Nyqvist et al., 2010; Johnson, 2004). It is reported that mothers who practice KMC were able to quickly overcome guilt feelings associated with preterm births and then develop greater confidence and competence about their nurturing abilities than mothers who had not engaged in KC (Charpak et al., 2005).

Based on the aforementioned benefits, studies advocate intrapartum and postnatal care in all types of settings to adhere to a policy of non-separation of infants from their mothers or families (Nyqvist et al., 2010; Bergh et al., 2013).

## **2.5 GLOBAL UPTAKE AND SCALING UP OF KMC**

The implementation of new healthcare interventions can be challenging as it demands intensive training or retraining of health workers at any level; be it at global, national or regional levels (Boundy et al., 2016). The task is particularly herculean for low resource countries (WHO, 2012a). In recent years, many ministries of health have collaborated with development partners



and health professionals to systematically introduce, strengthen, or promote the scale up of facility-based KMC (Joshi & Morade, 2013; Findley et al., 2013).

Areas that received attention include: setting KMC policy and service guidelines, developing clinical training materials, as well as supervision schedules and tools. Although KMC has become widely accepted during the past decade, it still remains unavailable on a large scale in most LMIC (Morakinyo & Fagbamigbe, 2017). The early implementation of KMC depends on hospital policies and the stability of the infant. This was highlighted by studies in the NICU of two tertiary hospitals in Finland which assessed the implementation of early physical contact of mothers and their preterm infants. Results reported differences between the study hospitals in the areas of infant's unstable condition and delivery by caesarean section, being the most common obstacles against early contact. (Niela-Vilén, Axelin, Salanterä, Lehtonen, Tammela & Salmelin et al., 2013).

KMC implementation is often intermittent and not adequately scaled up except in tertiary hospitals and a few dedicated centres where it was started as test run (Charpak et al., 2005). There is large scale-up of KMC in Brazil especially in the public sector. Four regions in Ghana accepted KMC in 2007 where it is reported that health workers participate in their quest to reduce neonatal mortality and morbidity, as well as sufficient scale-up in South Africa with some designated centres for KMC. Bergh, Kerber, Abwao, De-Graft, Aliganyira and Davy (2014), reported that in some countries, implementation starts in individual healthcare facility that also serves as education and training centres. The gradual spread of KMC to other facilities is reported in Botswana, Cameroon, Ecuador, Ethiopia, Malawi, Mali, Rwanda, Uganda, and Vietnam. KMC recorded close to 95% coverage in countries like Malawi, Mali, Rwanda and Uganda with demonstrated evidence of its practice. On the other hand, implementation under

the direction of a national, provincial or regional health authority is utilised in countries like Brazil, Colombia, Ghana, Indonesia, Madagascar, Nigeria, South Africa and Tanzania. In Indonesia, there is a health system strengthening which reports evidence of routine and integration in the affairs of KMC (Bergh et al., 2014).

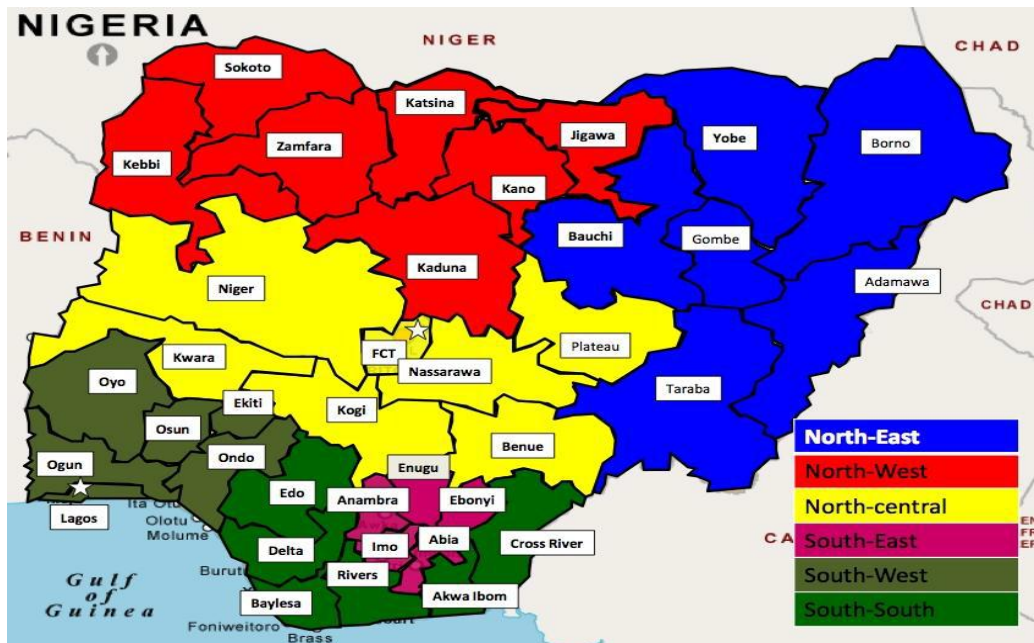
In all of these settings, teaching hospitals serve as centres of excellence from where strategies to scale up KMC flow. A multi-country study in Africa reports that tertiary hospitals are in the frontline in the provision of KMC (Bergh et al., 2014). This is in line with recommendations from previous study that teaching hospitals could serve as centres of excellence and be responsible for the education and training of personnel for KMC practice (Bergh et al., 2012). It would provide a national and central outlook to aid uniform standard and implementation processes, especially in countries or regions where KMC is not yet practiced or well-grounded.

### **2.5.1 KMC in Nigeria**

KMC in Nigeria will be described in terms of the geographical location and health status of its people before tracing KMC progress in the country and Edo State.

#### **2.5.1.2 The Demography and Health of Nigeria**

Nigeria, with a population of about 182 million people, is the most populated country in Africa and accounts for 47% of West Africa's population (NPC, 2017). The country is situated on the west coast of Africa and lies on latitudes 4° north of the Equator and latitudes 3° and 14° on the east of the Greenwich Meridian. Nigeria shares boundaries with The Republics of Benin and Niger in the west, Cameroon in the East, Niger and Chad to the north and the Gulf of Guinea in the South. The country occupies a land mass of 923,768.64sq Kilometers and 800km of coastline (NPC, 2017).



**Figure 2.1: Map of Nigeria showing the thirty-six state and the six geopolitical zones**

**Source: [www.statesinnigeria@fedgov.com](http://www.statesinnigeria@fedgov.com)**

The country has 374 ethnic groups with Hausa, Igbo and Yoruba constituting the major tribes. Each ethnic group has its unique language; however, languages spoken apart from the official English language are Hausa, Yoruba, Ibo and ‘Pidgin English’ an abridged version of the English language, spoken and understood by all and sundry including the uneducated. Furthermore, the country is divided into 36 states excluding Abuja the Federal capital city; 772 local government areas and six geopolitical zones namely: North-East (NE), North-West (NW), North Central (NC), South-West (SW), South-East (SE) and South-South (SS). The boundaries of local government and states are mainly due to ethnic and geographical affiliations.

The country, like most developing nations is plagued by overpopulation, effects of excess mortality due to AIDS, maternal and infant mortality (NPC, USAID, UKaid, 2013). According to WHO country cooperation strategy report in 2014, great disparities in health status are reported in Nigeria across states and geopolitical zones. Disease etiology is linked to social

determinants of health such as socioeconomic status, education, gender, access to water and sanitation, and hygiene levels (WHO, 2014). Edo State, one of the 36 states in Nigeria, is located in the south-south (SS) zone with its capital in Benin City.

### **2.5.1.3 The Introduction of KMC in Nigeria**

KMC was first introduced to Nigeria in the late 1990s through a resident paediatrician at the University of Lagos Teaching Hospital after a month-long training in Bogotá, Colombia (Aboda & Williams, 2012). The first study on SSC for Nigerian newborns was conducted in 2001. A training workshop was thereafter held with doctors and nurses from sixteen teaching hospitals across the country (Ajayi, 1998). In 2007, the Association of Community Care, Education and Social Services (ACCESS), a US non-governmental agency for international development of global programmes to improve maternal and newborn services across a continuum of care from the household to the hospital, supported the introduction of KMC in two general hospitals in Kano and Zamfara States. As part of the process, ACCESS worked with the Federal Ministry of Health (FMOH) to adapt a KMC training manual, which could be used by health institutions across the country to train staff on KMC (Aboda & Williams, 2012).

KMC has continued intermittently at various levels because it has not been systematically integrated as part of the infant care policy in Nigeria (Morakinyo & Fagbamigbe, 2017). Government and various non-governmental organizations (NGOs) continue to roll out the KMC programme, though not in a sustainable way. However, with support from a number of partners, Kano, Zamfara, Katsina, and Yobe States now have more than 50 trained KMC trainers who can train others in Nigeria (Aboda & Williams, 2011). In the partnership for reviving routine immunization in northern Nigeria and maternal and newborn child health initiative (PRRINN-MNCH) cluster facilities, over 150 health workers have been trained in

KMC. About 20 centres including primary health care clinics (PHCc), general hospitals and tertiary institutions are providing KMC services in Nigeria. Outside the teaching hospitals, there are two KMC centres established to address low birth weight babies in Kano and Zamfara States (Jhpiego, 2012).

A handful of investigations on KMC have been carried out in Nigeria. For example, Onubogu and Okoh (2016) investigated the proportion of Nigerian health workers rendering paediatric care who practice KMC in their institution, and encountered challenges. Findings revealed that the level of practice was significantly higher among respondents that worked in facilities that care for sick neonates. In 2017, Uwaezuoke, (2017) investigated Kangaroo Mother Care in resource-limited settings with regard to implementation, health benefits, and cost-effectiveness. He reported implementation gaps with country-specific, multifaceted challenges despite the advantages of KMC because of the availability of technology which is more accessible to developed countries.

#### **2.5.1.4 KMC in Edo State**

Edo State is one of the 36 states in Nigeria; it is located in the South-South zone of the country which has six zones. Edo State has a population of close to 3,233,366 million and a land mass of 6873sqm (NPC, 2017). The state is divided into three senatorial districts based on the ethnic affiliations of the people. The state contributes 6700 neonatal mortality out of the total 225,000 in the country annually (ESMOH, 2010). The practice of KMC is not widely embraced therefore, literature on its use is sparse and did not yield much result. A preliminary on-site investigation carried out by the researcher revealed that only one health facility in the state provides KMC (UBTH). A successful case report was presented by this facility on the

management of a 750gm female infant using KMC in hospital and at home (Adeniran, Omogberale & Sadoh, 2010).

Many healthcare workers interrogated by the researcher besides those in the teaching hospital are either unfamiliar with KMC or they feign ignorance as they have not received any formal training. In fact, the description of KMC by the researcher in the course of this preliminary survey was like a new concept to some of the health workers. They were quite receptive and willing to adopt this method of care, if and when, it is introduced in the hospital.

The UBTH has been at the forefront in the provision of maternal and child care since the late 1970s. It is an accredited centre of excellence and training on KMC with the support of United States of America Infrastructural Development (USAID) in partnership with the John Hopkins programme in Nigeria (Jhpiego, 2012). Furthermore, the institution practices the intermittent SSC KMC policy which is not primarily aimed at providing thermal care as incubators are available for use. Intermittent KMC is provided as an in-patient care after an adaptation period of the neonate who is certified as stable without any complications. This policy supports recommendations on KMC implementation on infants' eligibility for KC if he/she has overcome major neonatal problems and requires minimal care (Uwaezuoke, 2017; WHO, 2003).

Other benefits of KMC such as improvement in the infant's physiologic and neurobiological development were reported by the neonatologist in the NICU as some of the reasons for initiating KMC, and not necessarily for thermal protection, since the facility does not lack incubators as reported in previous studies (Moore, Anderson, & Bergman, 2007; Conde-Agudelo & Díaz-Rossello, 2014). This fact equally aligns with Uwaezuoke, (2017) who

reported lack of use of KMC because of the availability and accessibility of infrastructures especially in high resource countries.

## **2.6 CHALLENGES IN THE IMPLEMENTATION OF KMC**

The Oxford English Dictionary defines challenge as ‘resistance or obstacle against an order or ultimatum’ (Thesaurus, 2002). Despite the laudable objectives of KMC, it is plagued by challenges that cannot be wished away. In order to achieve its broad and specific objectives of reducing neonatal mortality, especially in low resource countries, these challenges have to be illuminated to allow for effective problem solving.

Charpak and Ruiz- Pelaez (2006) reported on their investigation of 25 developing countries who had received training in KMC in Bogota, Colombia between 1994 and 2004. Not all the teams were able to successfully put a workable KMC programme in place in the various facilities. Some of those that started could not replicate the validated model by WHO (2003). However, a systematic review of barriers and enablers of KMC practice by Seidman, Unnikrishnan, Kenny, Myslinski, Cairns-Smith & Mulligan et al., (2015), classified these challenges into three categories. Category one reviewed barriers experienced by mothers (parents); category two referred to barriers experienced by nurses, while the third category were those experienced by physicians and programme administrators.

### **a) Issues Related to Parents**

Parents reported lack of prior information before delivery (Blomqvist et al., 2013). In the same vein, some mothers find the demands of the continuous kangaroo position overwhelming, and refuse to continue or provide only partial kangaroo position (Nyqvist et al., 2010). A study that investigated supporting factors and barriers in implementing KMC in Indonesia reported challenges related to the inability of the mother or other family members to visit the infant

frequently and provide KC. Other issues are affordability of hospital user fees for infant to remain in hospital for a sufficient period of time and erroneous belief by some mothers that artificial formula feeding is a sign of economic affluence (Pratomo, Uhudiyah, Sidi, Rustina, Suradi & Bergh, et al.,2012). Mothers and families who consider that they can afford ‘the best for their infants’ often prefer total or partial formula feeding, because they are unaware of the proven benefits of human milk (Charpak & Ruiz-Peláez, 2006).

**b) Issues Related to Nurses**

KMC is considered sub-standard care because it is perceived as a ‘poor man’s alternative’ for developing countries. This is a common reaction among healthcare professionals to a low-cost intervention (Charpak & Ruiz-Peláez, 2006). Competent, well-intentioned healthcare professionals in developing countries often voice this doubt. It is a direct argument since it is a judgment formed before consideration of the evidence (Charpak & Ruiz-Peláez, 2006). Furthermore, KMC is considered as extra work for staff (Blomqvist et al., 2013). Hence healthcare professionals perceive the implementation and monitoring of the kangaroo position, kangaroo nutrition, early discharge from hospital and strict follow-up until term as extra work.

With regard to the kangaroo position, the direct SSC between a naked infant and the kangaroo position provider is considered unusual or even improper by professionals, mothers and their families in cultures where physical contact is restricted (Solomons & Rosant, 2012); this resulted in mothers complaining about inadequate privacy. Some mothers and healthcare staff are uncomfortable with the fact that mothers are exposed to strangers while learning the KMC position or breastfeeding their infants (Solomons & Rosant, 2012).

There is also the erroneous belief by health staff that infants do not need to wear a cap and socks in hot climates. The high ambient temperature they believe will protect infants in the



kangaroo position from excessive heat loss. They therefore regard the use of caps and socks as exaggerated and inappropriate (Charpak & Ruiz-Peláez, 2006). These beliefs have its outcome on healthcare personnel not allowing continuous kangaroo positioning when indicated.

Frequently, healthcare personnel initiating KMC programmes are unconvinced of the need to provide a continuous kangaroo position based on: i) some infants who are kept in the kangaroo position for only a few hours a day still grow properly and ii) the results of research in high-technology neonatal units in which an intermittent kangaroo position has been used successfully (Charpak & Ruiz-Peláez, 2006).

For Kangaroo nutrition, staff perceives the supervision of breastfeeding mothers as an extra workload. They assert that training and supporting mothers in breastfeeding a premature infant is demanding in terms of skill, time and effort. It is perhaps the most important barrier perceived by healthcare professionals (Blomqvist, Frörlund, Rubertsson, & Nyqvist, 2013). This finding is in agreement with a study in Egypt that reported staff resistance towards KMC (Nyqvist et al, 2010). This is followed by the early discharge and follow-up policies where staff are concerned about assuring the infant's safety after early discharge home, even though the requirements for safe discharge have been met (Blomqvist et.al, 2013).

In many developing countries, there is no close, targeted follow-up, not only of infants in kangaroo care but of all high-risk infants. Where such programmes exist, they involve different healthcare personnel from those who delivered KMC (Blomqvist et.al., 2013).

### **(c) Issues Related to Administrators**

Studies focusing on bottlenecks to KMC implementation reported leadership, governance and building of health work force in hospital management as key to effective management

(Valizadeh et al., 2013). This was supported by Seidman et al., (2015) who posited that notwithstanding a positive attitude, hospital administrators are hindered in the effective implementation of KMC by lack of modern infrastructure and budget; staff attitude and cultural issues which are beyond their immediate control (Charpak & Ruiz-Peláez, 2006). Many administrators who are not experienced find the early discharge component of KMC uncomfortable as they do not want to jeopardise the chances of survival of the neonate. They would rather postpone discharge to a later date (Bergh, Rogers-bloch, Pratomo, Uhudiyah, Sidi & Rustina et al., 2012b).

Furthermore, many developing countries, lack the close, targeted follow-up of infants discharged on KC. This problem applies not only to infants in kangaroo care but of all high-risk infants. In some cases where such programmes exist, they often involve different healthcare personnel who are not the same as those who delivered KMC, rendering the benefit of the follow-up programme worthless (Seidman et al., 2015). The resources to keep the KC programme running and to empower personnel to provide holistic care for the preterm infant could be a source of concern for administrators (Smith, Bergelson, Constantian, Valsangkar, & Chan, 2017; Seidman et al., 2015).

A consensus group on acceleration of global implementation of quality KMC for preterm newborns and LBW in Istanbul in 2013 summarized the reasons why KMC has not kept pace with long-standing evidence as: (1) incorrect perception of KMC as a practice for newborn preterm in low income countries only, (2) health providers disregarding the benefits of KMC and therefore lack effective implementation skills (3) lack of human resources and well-defined government policies and agenda on KMC and (4) challenging cultural and social norms related to mothers and newborn practices (Engmann, Wall, Darmstadt, Valsangkar & Claeson, 2013).

## **2.7 STRATEGIES TO UP-SCALE KMC**

Strategies are comprehensive, futuristic, purposefully designed plans of actions directed towards the achievement of a goal intended to outwit a competitor in a competitive environment. It describes how goals will be achieved by stating resources needed, process of formulation and specific instructions on what to do to achieve its implementation (Mintzberg, 1987: 67). This study aims to develop a plan to improve the uptake and facilitation of KMC guidelines by hospital management, OHWs and parents of preterm infants in Edo State to reduce neonatal mortality rate. It is therefore necessary to examine previous strategies that were adopted in order to achieve a similar objective.

Pattinson, Arsalo, Bergh, Malan, Patrick & Phillips (2005) in South Africa reported on the application of a qualitative approach which involved using key health workers to develop a conceptual tool for the scaling up of KMC implementation. This method tested whether a well-designed educational package on the implementation of KMC used on its own is as effective in implementing KMC in healthcare facilities in combination with a visiting facilitator or use of education package alone. Successful implementation was reportedly achieved in most of the hospitals irrespective of the strategy used. In Indonesia, 10 health facilities were surveyed to determine progress with KMC implementation (Bergh et al., 2012). A needs assessment was done, followed by a workshop, supervision and then assessment. Findings indicated that the two tertiary hospitals fared better in the final assessment than the teaching hospitals that has been practicing KMC. The study concluded that KMC requires long-term process and strengthening of institutions.

## **2.8 KNOWLEDGE, ATTITUDE AND PRACTICE OF KMC**

### **2.8.1 Nurses' Knowledge, Attitude and Practice**

The exploration of the knowledge, attitude and practice (KAP) of KMC practice by its key drivers is of importance as it lays the foundation of the success of the implementation strategy. Health workers active in the neonatal and maternity environments include neonatal intensive care nurses, public health nurses and midwives. They play strategic roles in terms of facilitation of KMC and psychosocial support to the parents, as previously espoused in this study. Their roles in information provision and the constant reassurance to the parents of preterm infants are well documented (Bergh et al., 2013). In addition, they are involved in the provision of comfortable environments and ensuring privacy of the parents during KMC facilitation (Bergh et al., 2013; Nyqvist et al., 2010; Renfrew et al., 2014). The encouragement of health workers to parents of preterm infants helps to influence the dynamic relation between the mother and her preterm infant (Nyqvist et al., 2010). These responsibilities can only be performed if the health workers are equipped with knowledge on current practices and information regarding KMC.

Knowledge is an important determinant in attitude formation. A national survey was conducted in the United States to assess the practices, knowledge, barriers and perception regarding KC among neonatal nurses in the NIC services. Findings revealed that nurses needed educational training aimed at highlighting the knowledge and skills needed to provide KC safely (Engler, Ludington-Hoe, Cusson, Adams, Bahnsen, & Brumbaugh, et al., 2002). Furthermore, the result indicated that nurses who worked in facilities that practiced KMC had gaps in their knowledge, while those who perceive KMC to be beneficial to themselves and the infants were willing to practice it in their unit (Engler et al., 2002). This is contrary to a survey from Australia which shows that neonatal nurses have good knowledge and a positive attitude toward KMC practice

and facilitation. Majority of the respondents in that study reported implementing KMC in their unit (Chia, Sellick, & Sharon, 2006). All the 34 neonatal nurses surveyed in the above study reported that they assisted and encouraged parents to provide KC. Majority of the nurses strongly agreed on the benefits of KC in promoting bonding 25 (73.5%), enhancing the physical wellbeing of the infant 18 (52.9%) and increasing parents' confidence 19 (55.9%). But some of the respondents were uncertain whether KC results in more effective breastfeeding 11 (32.4%). The authors' emphasized the need for in-service education to provide neonatal nurses with up-to-date information on the efficacy and beneficial effects of KC for infant and parents, as well as appropriate skill acquisition and opportunity for supervised practice. This was supported by a study that reported positive viewpoints on KMC by nurses in Tabriz, Iran which investigated nurses' viewpoints about the impact of KMC on mother-infant attachment (Valizadeh, et al., 2013). In the same light, Harmesh, Singh, Jain, Kaur and Kaur (2004), assessed the immediate cognitive impact of a KMC workshop on sixty three (63) final year medical students at a neonatal unit of a teaching hospital in India. Findings showed more than average cognition after workshop. This is validated by Hall & Kirsten (2008) who listed improved cognition of the infant as one of the benefits of KMC.

In South Africa, majority of the hospital nursing staff investigated on knowledge and attitude towards KMC exhibit a positive attitude, and agree that KMC is beneficial to both mother and infant (Solomons & Rosant, 2012). On the assessment of attitude in the same study, nurses felt that the requirement of manpower, close supervision by them and the use of heat convectors in the neonatal intensive care unit (NICU) decreased considerably.

### **2.8.2 The Attitude of Administrators towards KMC Implementation**

It is a well-known fact that the attitudes of the nursing staff and the mothers of preterm infants are important for successful implementation of KMC, but that of the administrators cannot be over-emphasized (Valizadeh et al., 2013). The administrators are meant to provide the needed leadership by their attitude, training and retraining programmes and the provision of the needed amenities and infrastructure. These are among other factors that form the key ingredients for staff commitment to practice KMC. The availability of a protocol on KMC and continuous education for all nursing staff can facilitate the successful implementation of KMC. A study in Indonesia that investigated supporting factors and barriers in the implementation of KMC reported challenges related to human resource and staff issues. Additionally, infrastructure and budget were among major handicaps encountered (Pratomo et al., 2012). This report is in contrast to that of Engmann et al., (2013) of Istanbul but supports the findings of Charpak and Ruiz-Peláez (2006) that nursing staff who are less experienced are less likely to implement KMC. This presents a major task for administrators and government.

This makes the provision of in-service education and a written KMC protocol on the efficacy and beneficial effects of KC for infant and parents by administrators imperative (Onubogu & Okoh, 2016).

### **2.8.3 The Effects of Socio-Cultural Practices on KMC Uptake**

Cultural practices are learned behaviours that have been socially acquired (Mehrotra, Gupta Sawhny, Agarwal, Gupta & Garg, 2013). They have the capabilities of being transferred from one generation to another thus impacting on the way people live in a particular community. Additionally, cultural practices form key areas of interest to the healthcare providers as it equips them with the beliefs and practices of the community in relation to maternal and child health as one of WHO strategy at improving neonatal outcomes (Callaghan-Koru, Seifu,

Tholandi, de Graft-Johnson, Daniel & Rawlins et al., 2013; Sutan & Berkat, 2014). Many people are aware of the potential dangers of these practices to the neonates but they still continue because “people live in the communities and household and want to maintain acceptable bonding relationships with others” (Sutan & Berkat, 2014:342). Some of these practices include early marriages, violence against women, widowhood practices, and female genital mutilation. The management or taboo regarding such practices at any stage by the individuals in a society with strong cultural myths and beliefs may result in severe adverse outcomes (Ibekwe & Ibekwe, 2010). These practices include but are not limited to the arts and sciences, religions and philosophies and also encompass others such as the method of preparing of food, breastfeeding and infant care such as cord care practices (Gupta & Mahajan, 2003).

A study that focused on neonatal health practices in India, reported unhygienic cord cutting, delayed breastfeeding and early bathing (Kesterton & Cleland, 2009). The authors then opined that some of these practices could be altered depending on the beliefs underlying them, its acceptability and by providing alternative care.

Similarly, in some parts of Gwalior rural region of Madhya Praesh of China, the newborn is not breastfed in the first three days after birth due to the misconception that colostrum is harmful. Instead, the child is put on water while colostrum is expressed and discarded (Mehrotra et al., 2013). This practice prevents the transfer of maternal antibodies and thereby increases the risk for many opportunistic infections in the infant. Adulteration of milk, delay or early starting of weaning foods are other misconceptions related to child rearing that could result in protein energy malnutrition with its adverse effect on child health (Mehrotra et al., 2013).

This assertion was supported in an Indonesian study that investigated the effect of cultural practices on neonatal survival among the Acehnese (Sutan & Berkat, 2014). The cultural practices reported include inappropriate antenatal care, bathing of baby at birth, late initiation of breastfeeding, discarding colostrum and not practicing exclusive breastfeeding. The study recommended improving knowledge of heat preservation to prevent hypothermia by the use of Kangaroo mother care among others.

Furthermore, a study in Uganda reported that LBW was not appreciated as a danger sign in newborns and therefore mothers did not seek health care (Nabiwemba, Atuyambe, Criel, Kolsteren, & Orach, 2014). In addition, some mothers who initiated good care practices for LBW newborns in the facilities did not sustain them at home. Practices related to cord care and keeping the baby warm were good while those concerning initiation and exclusive breast feeding, and bathing the baby were noted to be poor (Nabiwemba et al., 2014).

Some of these findings align with the Nigerian studies especially in Bayelsa State, where Opara, Jaja, Dotimi, & Alex-Hart (2012) used a cross sectional survey on 221 mothers to investigate newborn cord practices. Findings indicated that newborns were given a bath soon after birth and initiation rates of breastfeeding were 65.3% within one hour and 95.7% within 24hours. Similarly, in Western Nigeria and Edo State in particular, cord care was reportedly done by the application of methylated spirit and then other substances including antibiotic ointments and herbs were applied. Harmful cord care practices were reported to be more common among mothers who delivered outside the hospitals in Benin City, Edo State (Adelaja, 2011; Iyoha & Ibadin, 2012).



Resistance from health professionals, mothers and families regarding issues related to local cultural practices are reported. by Charpak and Gabriel Ruiz-Peláez (2006). They argue that even when a mother is convinced to provide KMC for her preterm infant, she needs the approval and authorization from her husband and at times mother-in-law to commit herself to a continuous kangaroo position. Barriers such as fear and anxiety of hurting the newborn, lack of help with KMC and other obligations place a burden on the woman, and their immediate and extended family (Seidman et al., 2015). In all these studies, authors recommended community-based interventions and health education to improve the knowledge of women and members of their families, as well as ensuring the availability of skilled health personnel at all times.

#### **2.8.3.1 Male Participation in the Care of LBW infants**

Male participation in newborn care is an important strategy in achieving the 2030 SDG goal 3 because “in many communities, men are the decision makers and the financial source in families” (Simbar, Nahidi, Tehran, & Ramezankhani, 2010:633). There are numerous cultural barriers to paternal participation in the care of the neonate some of which are related to gender and generational divisions of labour (Dumbaugh, Tawiah-Agyemang, Manu, ten Asroek, Kirkwood & Hill, 2014). Even though there are advances in medical care and societal change, cultural values still come into play when the care of the newborn is discussed; fathers are marginalized in the care of the neonates. Charpak & Ruiz-Peláez (2006) identified cultural barriers to paternal participation in the care of LBW infants, to be related to a father’s perception that the direct care of the premature infant is the natural role of the mother. A study in South Africa reported that even when fathers are willing to render such care, female health professionals and mothers do not allow fathers to be directly involved in neonatal care (Solomons & Rosant, 2012). Most cultures, they asserted, considered the mother to be the sole care provider for infants and children. The origin of these barriers is traceable to the patriarchal

nature of the African family and genealogical set up where many fathers think they do not have a role to play in neonatal care; hence they perceive this to be a purely female affair (Solomons & Rosant, 2012).

## **2.9 CONCEPTUAL FRAMEWORK**

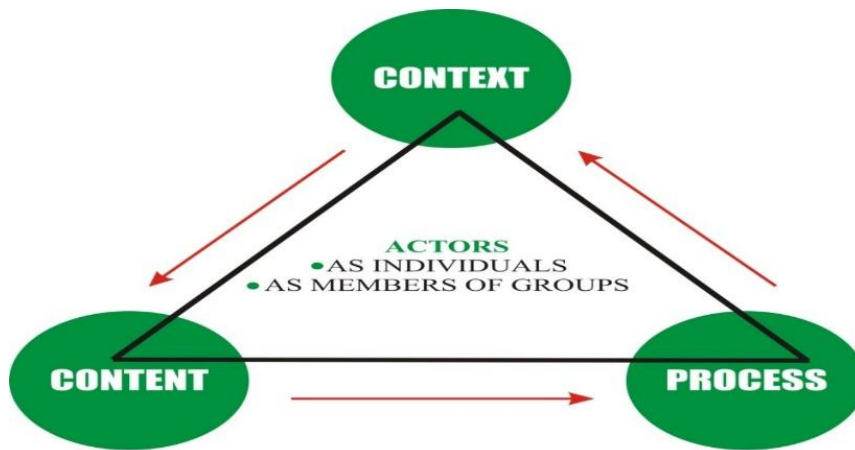
Conceptual framework refers to the structural plan into which the overall concept of a study is built. It helps to create and align the various issues relating to the study for better observation and understanding. This study adopted two frameworks, one in each phase of the study. The health policy analysis triangle by Walt and Gilson (1994) in phase one and the TQM philosophy by Tenner and De Toro (1992) in phase two.

### **2.9.1 The Health Policy Analysis Triangle**

To understand the knowledge, attitude, practice and challenges of the drivers of KMC, it was important to highlight the roles played by the actors in relation to the concept and content of KMC by using the health policy analysis triangle. Policy analysis is “defined as the task of analyzing and evaluating public policy options in the context of given goals for choice by policy makers or other relevant bodies” (Paul, Steedom & Sutton, 1989 in Walt & Gilson, 1994:353). The model is based on the key elements that come into play before, during and after formulating a policy. It is a simplified framework used globally to evaluate policy process and implementation in health and allied industries. It is based on four independent and interrelated factors namely actors, context, process and content which are key to understanding a policy process. It is used to highlight actors’ involvement in policy making, implementation and evaluation with all the key factors (context, process and content) deserving equal attention.

These factors are interwoven and are considered systematically in order to achieve a holistic framework. It was used as a conceptual model to explore knowledge, current practices and the

facilitation of KMC by health workers and contextual barriers to KC by mothers of preterm infants as shown in figure 2.8. However, the process of policy formulation is left out in this study.



**Figure 2.9.1: A model of the Health Policy Analysis Triangle**  
**Source: (Walt & Gilson, 1994:354).**

### 2.9.1.1 Assumptions of the Health Policy Analysis Triangle

The health policy analysis triangle model assumes that health policies are not only about prescriptions or descriptions made to achieve particular outcomes on diseases, nor is it developed in a social vacuum; rather it is an outcome of a complex, social, political and socio-economic interactions. Health policies are implemented if the implementers are involved in its development. The understated are the key concepts in the health policy analysis triangle:

- ❖ **Actors:** are individuals, stake holders or members of groups or organizations who are influenced by their powers, roles and values in relation to developing the reforms of interest. Policy making and the interactions between the actors are based on their current practices, their position in the power structures, their own values, expectations and challenges regarding their practice.

- ❖ **Context:** This is the situation or location of a particular issue. It could be affected by endogenous and situational factors, structural problems, history and cultural factors; or exogenous factors which include events and values outside a country or system.
- ❖ **The process:** the process of policy making is associated with the identification, development and implementation of the timing, the strategies used at each stage of the policy process, and the specific mechanisms or bodies established to take any of the steps forward (Walt & Gilson, 1994).
- ❖ **Content:** The content of the health policy is the specific nature and design of reforms, the interaction between specific policies under consideration and between parallel institutional changes, as well as implementation guidelines (Walt & Gilson, 1994).

In this study, the four dimensions of the policy framework and the principles involved in each stage are as follows;

**a. Actors:** Actors are used to denote individuals such as neonatal intensive care nurses, public health nurses who are jointly referred to as operational health workers, parents of preterm babies, administrators and experts.

**b. Context:** Factors which are unique to a country, state or local government area. They could include political, economic, perceptual or social-cultural issues which may impact on health policy implementation. The Edo State of Nigeria is the focus of this study where the health facility practicing KMC is located and to which the study results are generalized.

**c. Content:** The KMC guideline as recommended by WHO (2003) is the content under consideration. The awareness and modalities of implementation of these guidelines by the OHWs, administrators and parents were ascertained.

**d. Process:** This was the means used to establish what people do in terms of their practice of KMC. The OHWs, administrators and the parents of preterm were investigated to understand what and how they have been doing in respect to KMC practice; the challenges they have and their suggestions on how to resolve the identified challenges.

### **2.9.1.2 Application of the Model**

The health policy analysis triangle has been used several times by various researchers. For example, it was used to understand the evolution of primary healthcare in Fiji and, by means of this, the policy process in the Pacific. The Fiji study reiterated the importance of developmental research on public policy and action by taking initial steps to assess how policy is actually made (Negin, Roberts, & Lingam, 2010). Similarly, it was applied in a postgraduate study in Ottawa Canada to investigate the document policies regarding misoprostol (drug used for post-partum hemorrhage) use in crisis settings, to clarify the position and alignment of policies, and understand how policies on the ground affect misoprostol use (Arnott, 2014).

In this study, the actors in the model are the OHWs, parents of preterm and LBW infants, administrators, experts (strategy refiners or quality assurers). However, the policy developers were excluded because the focus was on evaluating policy implementation. The concepts addressed in this policy formed the basis of the questionnaire development which addressed various key players of the policy. Actors are required to be familiar with the content of the KMC guidelines. Ascertaining the content of the policy dealt with the knowledge the actors currently possess regarding the KMC guidelines and its application, as well as challenges encountered. The context dealt with issues of perceptions, attitude, socio-cultural practices and values that could create possible barriers or contribute to the success of KMC. The process

investigated the knowledge, attitude, practice of KMC, as well as challenges experienced by the actors; it is the hallmark of the study.

There was a need to explore the current practices of the actors based on their context before any strategy development could meet the needs of the end users. The level of implementation and challenges had to be ascertained in order to provide baseline information. Hence health workers, administrators and parents formed a unique group from whom this information was derived.

## **2.10 THEORETICAL FRAME WORK**

### **2.10.1 Total Quality Management (TQM)**

The word ‘quality’ has many different definitions, ranging from conventional to those that are strategic. However, the one strategic definition that has gained international acceptance is “meeting customer requirement” (Chakravarty, Parmar, & Ranyal, 2001:226). Edwards Deming, the father of the concept of TQM has defined quality as a strategy aimed at the needs of the customer, present and future. The American National Standards Institute (ANSI) and American Society of Quality (ASQ) define quality as “The totality of features and characteristics of a care or service that bears on its ability to satisfy given needs” (Pearson, Blair, Daniels, Eckel, Fair & Fortmann et al., 2002:288). The view of quality as the satisfaction of customer needs is often called fitness for use (Patel, 2009). TQM is thus an accepted management process in industries to interact with the competitive market place and focus on quality of products and ensure customer satisfaction at every stage, internally and externally (Patel, 2009).

In this study, the internal customers are the operational nurses and other service departments in the health care facility who indirectly provide service such as the nurses in the obstetrics and gynaecology unit, labour ward, laboratory technologists and so on. Their ultimate satisfaction would be determined by the increased job satisfaction evidenced by their output and KMC practice with resultant effect on reduction in neonatal mortality. The external customers are the parents of the preterm and LBW infants and the general public. Satisfaction in this category would equally be determined by increased service use and uptake of KMC practice.

Although TQM had its roots established predominantly in industry, many researchers feel that the philosophy of TQM can be applied to health, the complex nature of its organizations' and deficiencies in service notwithstanding (Brigham, 1993; Chakravarty, et al, 2001). Quality of service have dominated discussions and emerged as key issues in the health sector in recent past (Balasubramanian, 2016). TQM has been widely applied in the clinical field with successful outcomes. Hence, TQM is viewed as a system that makes quality the responsibility of all clinicians and administrators throughout the healthcare organization (Al-Ali, 2014).

It has been accepted as a major long-term strategic initiative towards continuously improving quality of healthcare. The key concepts of TQM start with top management leadership with the emphasis on process and customer focus. Therefore, implementation of TQM in tertiary and secondary hospitals will require quality management awareness, training and framework development as well as development of customer awareness (Chakravarty et al., 2001). TQM is not a short-term solution; it has to be understood and practiced as a long-term strategic commitment.

The theoretical foundations of TOM philosophy will be explored as a means of demonstrating how TQM can be applied to enhance KMC guidelines in Edo State, Nigeria.

#### **2.10.1.2 The Theoretical Foundations of TQM**

The theoretical foundations of TQM is based on four interdependent bodies of knowledge, namely systems theory, variation (statistical theory), theory of knowledge and theory of psychology (De Bryn, 2003; Evans & Dean, 2002).

##### **❖ Systems Theory**

A system is a network of elements or sub-systems that are interdependent and interrelated and functions as a unified whole to attain goals. The system makes its boundaries explicit by defining which people, functions, components and aims are included in the system (De Bryn, 2003). Emphasis is on the relationship between the various sub-systems of the organization, as much as on the nature of the sub-systems themselves. The sub-systems serves the total system and not the individual sub-systems, as any benefit or threat to a sub-system, directly impacts on the effectiveness and quality of the total system (De Bryn, 2003:39).

KMC uptake in healthcare facilities is regarded as working like a system, because its provision in the NIC as a sub-system is interdependent, synergistic and functions as a whole to ensure the effectiveness of quality of services rendered in the healthcare industry. Administrators work on the system to attain and optimise the quality of care provided in the facility.

##### **❖ Variation Theory**

Variation theory is a theory of learning and experience that explains how a learner might come to see, understand, or experience a given phenomenon in a certain way (Marton & Booth, 1997). The theory assumes that there are critical aspects of a given phenomenon that learners



must simultaneously be aware of and focus on in order to experience that phenomenon in a particular way. Understanding the critical aspect of a phenomenon results from experiencing variation in dimensions that correspond to that aspect.

People learn with preconceptions about how the world works. If their initial understanding is not engaged, they may fail to grasp the new concepts and information that they are taught, or may learn them for the purposes of a test but revert to their preconceptions outside the classroom. To develop competence in an area of inquiry, the learner must (a) have a deep foundation of factual knowledge, (b) understand facts and ideas in the context of a conceptual framework, and (c) organize knowledge in ways that facilitate retrieval and application (Ling, 2012).

Variation Statistical Theory is a system which consists of a production process that combines the input of many different people, materials, equipment, methods and environments to produce an output which has a distribution with variation (De Bryn, 2003). If the distribution is consistent over time, the system is said to be stable. Understanding a stable system is essential for managing and improving the quality of a system, as the system must be stable before it can be improved. Improvements are made by changing the input or process to increase the output or by changing the input or process to reduce variability. Along with the output, each step of the process and every input must be examined in order to ensure stability of the system, and for improvements to be applied (De Bryn, 2003:40; Evans & Dean, 2002:48; Tenner & De Toro, 1992:52).

Before a strategy to enhance KMC guideline can be developed, it is necessary to have more knowledge about variation in outputs in terms of the knowledge, attitude and practice

(processes) and inputs (challenges) of its implementation in healthcare facilities. This study examined the outputs, processes and inputs of the sub-systems of KMC with regard to the knowledge, attitude, practice and challenges encountered by the workers, as well as administrators. The mothers of preterm infants were investigated regarding their inputs in the form of practice and factors affecting inadequate uptake of KMC.

This allowed some variables to be measured in the form of conclusion statements on problems identified and improved through the development of a strategy to enhance the early implementation of KMC guidelines. However, in order to truly benefit from this theory to reduce variability, the variations in outputs, processes and inputs in KMC facilitation must be measured over time, either nationally, or at state level (as in this study), PHCs or a unit level on an annual basis.

#### ❖ **Theory of Knowledge**

The theory of knowledge is a branch of philosophy concerned with the nature and scope of knowledge (Evans & Dean, 2002). TQM subscribes to the fact that knowledge can only be advanced in the existence of a theory; experience alone does not establish a theory. In order to improve a system, the process must be clearly defined and conceptualized, so that it can be understood by customers, both internal and external based on theory (De Bryn, 2003). The theory establishes a cause-effect relationship that can be used for prediction, and should be based on knowledge or experience or on some restructuring of elements within and/or outside the present process (De Bryn, 2003; Evans & Dean, 2002).

The key sub-systems of KMC with regard to the nature of the mission, resources, activities, patients, processes, leadership, policy, strategy and performance were defined based on

assumptions that the facility is an established Federal government-owned and accredited KMC centre. Furthermore, the early implementation of KMC guidelines was based on the philosophy of TQM which has been successfully applied in health systems management (Chakravarty et al., 2001; Patel, 2015).

#### ❖ **Theory of Psychology**

The theory of psychology helps to create an understanding of human nature with regard to interactions between people and circumstances, interactions between leaders and employees, motivation, and any other system of management (De Bryn, 2003). People differ from one another in the ways they learn, the level at which they perform and their motivation. Leaders have an obligation to make changes in the system that will stabilize the system and/or provide opportunities to improve outputs, processes and inputs while recognizing the individual differences and preserving the positive innate attributes of people in the system (De Bryn, 2003; Evans & Dean, 2002).

In this study, the administrators should work on the KMC programme in nursing in order to stabilize and/or to provide opportunities to improve the outputs, processes and inputs of the sub-systems. In addition, they should work on the health provision in nursing with regard to resources, activities, patients, processes, leadership; policy and strategy, society and performance and evaluation of the programme. Moreover, the administrators should pay attention to psychological principles through respecting the individual differences of OHW and optimizing their strengths, abilities and inclinations to work in the NICU to attain and optimise the early implementation of KMC.

### 2.10.1.3 TQM Application

In this study, TQM is defined as a comprehensive, people-focused management system that involves all employees at all levels, and continually aims to improve the quality of processes, products and services to increase customer satisfaction (Tenner & De Toro, 1992:33).

TQM is based on three fundamental principles that encompass its overall concept and, if they are efficiently administered, will promote the continuous improvement of an organization. The three fundamental principles of TQM are: focus on the customers, internal and external; process improvement and total involvement along with six supporting elements of leadership, team work, communications, continuous improvement, employee involvement, education and training (Tenner & De Toro, 1992:33). Figure 2.10.1 presents a graphical presentation of the TQM approach.

Objective	Continuous Improvement		
Principles	Customer Focus	Process Improvement	Total Involvement
Elements	Leadership		
	Team Work	Communications	
	Support Structure		
	Employee Involvement training	Education and	

**Figure 2.10.1.3: A graphical presentation of the TQM approach (Tenner & De Toro, 1992:17).**

The principles and elements of TQM will now be discussed and applied to the application of KMC in health facilities in Edo State, Nigeria.

### 2.10.1.4 The Principles of TQM

Based on the objectives and principles of TQM, as espoused by Tenner & De Toro (1992) and graphically presented in figure 2.10.1, continuous improvement of the organization hinges on

three fundamental principles of focus on the customers (internal and external); process improvement and total involvement (El-Tohamy & Al Raoush, 2015).

The customer focus principle is based on the concept that every system or organization has a customer, which may be internal and external whose requirements, needs, and expectations must be met and/or exceeded every time. This means that the system must really understand the requirements of its customers in order to ensure effective service delivery (El-Tohamy & Al Raoush, 2015; Tenner & De Toro, 1992). This principle requires the total system to have organizational plans and priorities to ensure complete customer satisfaction, and that the total system should be dedicated to the aim of achieving the highest standards of performance as required by their customers. The quality of an organization is said to be achieved when the customer's needs are met (El-Tohamy & Al Raoush, 2015). The customer is the judge of quality.

From the TQM perspective, all strategic decisions a healthcare institute makes are customer driven. Customer-driven firms measure the factors that drive customer satisfaction. According to the Southern University of New Orleans in Los Angeles USA, a strategic document has to investigate the perception of value and satisfaction of its customers and infuse these into the work plan during the period of preliminary investigation (SUNO, 2010). By so doing, many factors ranging from the customer's overall purchase, ownership and services will be identified; thus reducing defects and error and eliminating causes of dissatisfaction which contribute significantly to a company's views of quality.

In this study, the customer focus extends beyond the customer and internal relationships because the general public or society represents an important customer of business. Business

ethics, patient health and safety, environment and sharing of quality standards in the healthcare systems and communities are necessary activities the administrators should take into account when applying TQM. The administrators' focus should be on the demands and genuine complaints of the customers who are the parents of the preterm infants and the society at large.

The internal customers in this study are the OHWs and the administrators. Studies reported on the notion to develop a market orientation that employees should be encouraged not to only focus on the needs of the end customer but also to recognize other employees as internal customers (Conduit & Mavondo, 2001). Successful marketing strategies in service firms are accomplished through individual service employees and their interactions with customers whether internal or external (Donavan, Brown & Mowen, 2004). It therefore means that health workers are internal customer because they provide service to the organization and fellow employees and other departments within organizations, as well as its suppliers and anyone else with whom the organisation works to get its jobs done (Donavan et al., 2004). It builds on the notion that organizational dynamics and managerial action in areas such as employee training, effective communication systems, and managing human resources are critical to building an internal customer orientation. The authors assert that a good market orientation with positive influence of customer orientation on certain job responses are stronger for service workers who spend more time in direct contact with customers than for workers who spend less time with customers (Eagle & Brennan, 2007; Donavan, Brown & Mowen, 2004) .

The process improvement principle is built on the premise that work is the result of a series of well-coordinated and interrelated steps and activities of the total system, every sub-system, every activity and every single person at every level that results in an output. Continuous attention to and generation of quality in each of these steps and activities in the work process

are necessary to reduce the variability of the output and improve the reliability of the process. Reliability is important in the sense that they produce the desired output each time with no variation (De Bryn, 2003; Tenner & De Toro, 1992).

The total involvement principle stresses a systematic, integrated, consistent, value-based, organization-wide perspective involving the total system of everyone and everything. It begins with the active leadership of senior management and includes efforts that utilise the talents of all employees in the system fully and creatively. This is regardless of their position or status, to share responsibility and be involved in the enterprise of continuous improvement in all sub-systems and activities in the system to gain a competitive advantage in the marketplace. It includes the internal interrelationships among the various sub-systems of the system, as well as the relationships with customers (De Bryn, 2003; Tenner & De Toro, 1992).

In this study, the supporting elements and principles of TQM is applied to guide the researcher in the development of KMC objectives, functional plans and tactics because it addresses the key issues involved in management of human resources. Leadership is not to be seen as administration alone but that which focus on customers' satisfaction through, teamwork, continuous improvement, employee involvement in decision making and responsibility as well as education and training to ensure the users get satisfaction from the service providers whether at public, private health facilities which may be tertiary/secondary/ PHCc/units (Patel, 2015; Tenner & De Toro, 1992). These elements are further explained as it applies to the study.

### **2.10.2 Supporting Elements of TQM**

The elements of TQM are leadership, team work, communication, continuous improvement, employee involvement, education and training. The principles of TQM and the overall

objective of continuous improvement will be discussed in relation to the enhancement of early KMC implementation guidelines.

❖ *Leadership*

The supporting element of leadership refers to the fact that administrators should advocate, teach, and guide OHW and other personnel in the process of implementation of the KMC programme based on TQM philosophy. Furthermore, the ward managers and administrators must lead in enhancing and developing the knowledge and skills of the OHW and the nursing profession through quality education in nursing practice (Patel, 2015; Tenner & De Toro, 1992:52).

❖ *Teamwork*

The success of a healthcare facility depends increasingly on the knowledge, skills and motivation of its work force to work towards a common goal in team spirit and not adduce success to a particular group or persons. In healthcare management, individuals and departments primarily work for the good of their units. In Total Quality (TQ), individuals cooperate in team structures such as quality circles, steering committees and self-directed work teams. A department works together towards system optimization through cross-function teamwork.

In this study, the NIC nurses work in a team with the child health department which houses the paediatric unit. It has direct relationship with the public health unit and the maternity and obstetrics and gynaecology unit. Suffice it to say that teamwork in the health services cannot be limited to certain areas as relationships cuts across all units ranging from the records section to the laboratory and the pharmacy department.



### ❖ *Communication*

The process of continuous improvement and uptake of KMC based on the TQM philosophy should be communicated to internal and external customers.

In this study, the various means of communication and channels should be flexible and not too formal. These could be through the bottom-up or top-bottom approach to facilitate proper information dissemination. Staff in the various units should be constantly kept abreast with happenings and current trends in neonatal practice using notice boards, newsletters, staff meetings and so on to disseminate information regarding current practices for clarity and understanding.

### ❖ *Support Structure*

Support structure is part of the management of all systems and processes. Achieving the highest performance requires a well-defined and well-executed approach to how employees welfare are been attended to. Support refers to those issues that pertain to staff welfare in form of free access to health care services for staff and their dependents, access to housing loans and other credit facilities. The process of continues improvement must contain regular cycles of planning, execution and evolution

In this study, support structure is advocated in the areas of soft loans, housing scheme, workshops, study days, in-service training as well as access to healthcare journals.

### ❖ *Employee involvement*

People at all levels are the essence of an organization and their full involvement enables their abilities to be used for the organization's benefit. A healthcare institute's success depends increasingly on the knowledge, skills, and motivation of its work force. In healthcare

management, individuals and departments work better if involved in decision making in issues that pertains to the good of the organization. In total quality (TQ), individuals cooperate in team structures such as quality circles, steering committees and self-directed work teams. Departments work together towards system optimization through cross-function teamwork. Administrators should therefore ensure the OHWs are carried along in all decision-making processes.

In this study, employee involvement takes the form of participation in the day-to-day management of the welfare of the NICU which in turn translates to good outcomes for both the neonates, mothers and themselves. Matters involving staff job outputs, opportunities and progress should be tailored directly to them or through representatives.

#### ❖ *Education and Training*

Education and training also refers to the fact that administrators must prepare OHWs as leaders, teachers, managers, researchers, clinicians, advocates and scholars through quality and continuous education in nursing (Tenner & DeToro, 1992). Training is part of the management of all systems and processes. Achieving the highest of performance requires a well-defined and well-executed approach to continuous improvement and learning. Learning refers to the adaptation to changes, leading to new goals or approaches. Improvements and learning need to be embedded in the way an organization operates. The process of continued improvement should contain regular cycles of planning, execution and evolution (Patel, 2015). Management should avail workers the opportunity to improve themselves on the job by offering in-service training, seminars, workshops and refresher courses.

In this study, management's responsibility of continuous improvement of its employees is highlighted by urging it to provide avenues for the OHW to train and retrain in the KMC concept. This is advocated in the form of training leave, sponsorship and encouragement in professional association membership where peer review of studies done on KMC is shared and socialization also takes place. Staff with special interest in neonatal care should be identified and encouraged. The administrators should support workers by means of an enabling environment in terms of emotional and material support to improve the potential of workers to provide KMC and sustain it.

## **2.11 GAP IN LITERATURE**

Having critically reviewed literature on KMC as a strategy to reduce neonatal mortality especially in low resource countries, the obvious gap identified was limited research of KMC at community level. Majority of studies conducted thus far concentrated on facility-based KMC. KMC has not been adequately extended to the grassroots level where maternal and infant death occur due to inadequate and skilled attendant at birth (Disu, 2013). The use of community kangaroo mother care (CKMC) as a practice of continuous KMC, that can be initiated by the healthcare provider and continued at home is not well-reported in literature.

Studies that reported on its application during various periods (2003-2011) in Bangladesh to teach community health workers (CHW) how to care for expectant and post-partum women is hereby described.

KMC was adapted for immediate postnatal period where the incidence of home delivery, LBW, and neonatal and infant mortality is high and neonatal intensive care was unavailable. Half of 42 unions in 2 Bangladesh divisions with the highest infant mortality rates were randomly

assigned to community-based KMC, while the half were not. Results indicated that except for care seeking, community-based KMC behaviours were more common in the intervention than control group, but implementation was weak compared with the pilot study. The study recommended additional experimental research ensuring baseline comparability of mortality, adequate KMC implementation, and birth weight assessment as necessary to clarify the effect CKMC on survival (Sloan, Ahmed, Mitra, Choudhury, Chowdhury & Rob, et al., 2008).

Previously, a study whose main objective of using KMC was adopted at the community level where it had not been formally adapted for community-based implementation. More than 50% of women in the study were found to give birth in health facilities. Training, community-based workers who identified and interviewed 35 expectant or recently delivered women at one month postpartum to evaluate their experience with CKMC was adopted. Results showed that CKMC mothers delayed newborn bathing, while few slept upright with their newborns (Quasem, Sloan, Chowdhury, Ahmed, Winikoff & Chowdbury, 2003).

Furthermore a study had explored the acceptability of skin-to-skin care (SSC) in rural Uttar Pradesh, India by the application of community-based workers in intervention clusters to implement a community mobilization and behavior change. Communication programme that promoted birth preparedness and essential newborn care, included adoption of SSC, with pregnant mothers, their families, and key influential community members was employed. Results indicated incidence of hypothermia (<36.51C) was high in both LBW and normal birth weight infants; no adverse events from STSC were reported. SSC was perceived to prevent newborn hypothermia (Darmstadt, Kumar, Yadaz, Singh, Singh & Mohanty et al & the Saksham Group, 2006). Similar studies employed a randomized controlled study of CKMC in

Bangladesh and mothers' experiences with immediate KMC. A review of existing data document determined the association between CKMC implementation and its potential benefits. Findings showed that newborns held in STSC less than 7 hours per day in the first 2 days of life do not experience substantially better health or survival than babies without being held SSC (Ahmed et al., 2011).

CKMC can be adopted due to its inherent advantages in the reduction of neonatal mortality as previously espoused were most births take place in the rural community with short supply of medical personnel.

## **2.12 SUMMARY**

This chapter reviewed literature relating to KMC as a measure of neonatal reduction globally, nationally and locally. The attitude of OHW and administrators and challenges faced with KMC were explored alongside the effects of harmful socio-cultural practices that impinge on infant wellbeing. The conceptual framework applied to the study was also highlighted. Consequently, it was concluded that KMC has not gone beyond the facility level as gaps were identified in its practice in the community. The next chapter addresses the design and methods applied to the study.

## **CHAPTER THREE**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **3.1 OVERVIEW OF CHAPTER**

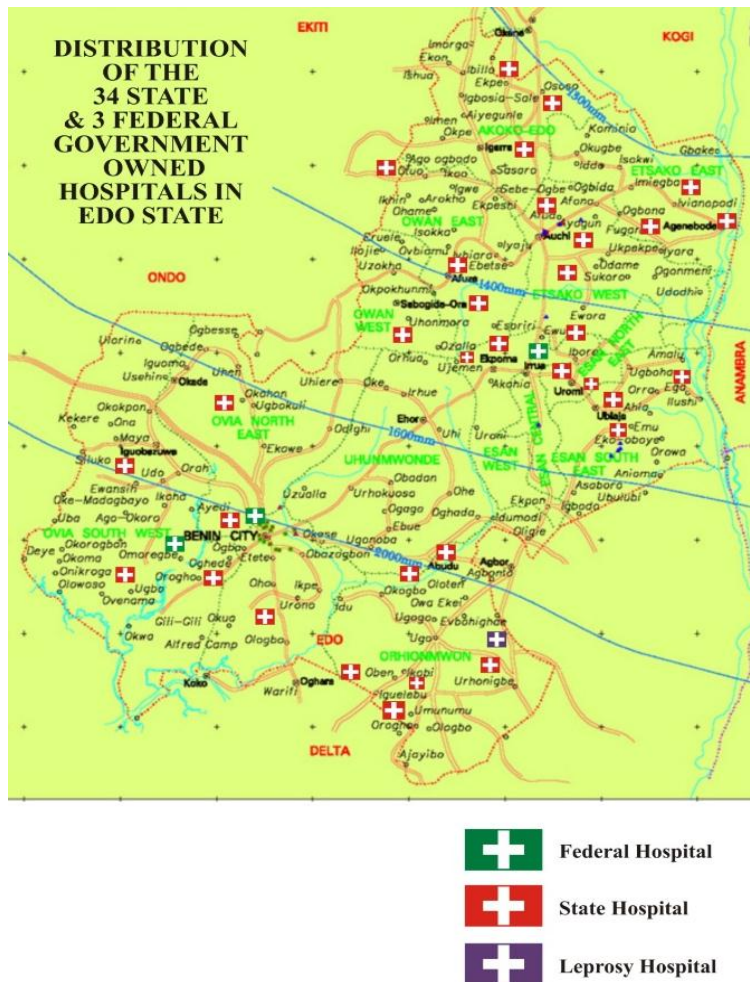
This chapter describes the research approach, methods and procedures used in the study. It describes the research design, setting and population in accordance with the aim and objectives of the study phases (1&2), as well as the rationale for the choice of the methodology in both phases. This chapter concludes with a discussion about the rigour and ethical issues applicable to the study.

#### **3.2 RESEARCH APPROACH**

As explained earlier in chapter one of this study, this research was conducted using multiple methods. The multi-method approach combines both qualitative and quantitative forms of data collection to investigate a phenomenon of interest (Onwuegbuzie & Leech, 2007). The researcher's assumption is driven by pragmatism which is geared towards solving practical problems in the real sense of the word (Denzin & Lincoln, 2011). The choice of a multi-method approach therefore allows for different methods for exploration of the different populations, as well as the objectives of the study.

#### **3.3 RESEARCH SETTING**

The study was conducted in Edo State, Nigeria and will be described within this context and that of the health institution where the study was conducted.



**Figure 3.3: The Edo State Health Context**

Nigeria is the most populous country in Africa with an estimated population of 182 million (NPC, 2017). It has 36 states, including the federal capital territory. Edo State is one of them and it is located in the South-South zone of the country which has six zones, namely North East, North West, North Central, South East, South West and South. Edo State has a population of close to 3,233,366 million and a land mass of 6873sqm (NPC, 2017). Benin City, the capital of the state is located in Edo South senatorial district. It occupies a land mass of 17,802 square km and is referred to as one of the ancient cities of the world (The Guardian, 2016). See figure 3.3.

The latest available estimated population of the city is 1.6 million people (NPC, 2017). The city is popularly referred to as “the gateway city” because it links the north through Kogi State, the east through Anambra State, the west through Ondo State and the South Eastern part through Delta State. The city of Benin, like other urban centres, is overpopulated with the concomitant problem of uncontrolled urbanisation which includes overcrowding.

The state is further divided into three senatorial districts based on the ethnic affiliations of the people. The senatorial districts are: Edo South, comprising 7 local government areas (Oredo, Orhionmwon, Ovia North East, Ovia South West, Egor, Uhumwode and Ikpoba Okha); Edo North with 6 local government areas (Akoko Edo, Etsako East, Estako Central, Etsako West and Owan local government areas) while the third senatorial district-Edo Central is made up of Esan Central, Esan North East, Esan South East, Esan West and Igueben local government areas.

There are three federal and one private tertiary health institutions in the state, coupled with 34 state government-owned secondary hospitals and 559 Primary Health Care centres (PHCc) that are spread across the three senatorial districts of the state (FMOH, 2007). These are complemented by many private and mission approved hospitals by the government. However, Edo South Senatorial district has the highest number of specialists and referral hospitals as two out of the three Federal Health Institution and a private health institution is located in the district (University of Benin Teaching Hospital (UBTH), Psychiatric Hospital, Uselu and Igbinedion Teaching Hospital, Okada—a private hospital). These are complimented by three major secondary hospitals in the state that receive large turnouts of clients in terms of maternal and child health issues: the Stella Obasanjo Women and Children Hospital, Central Hospital and St Philomena Catholic Hospital (Private Mission Hospital).



Of all the facilities mentioned in Edo State above, only one of them-UBTH, promotes KMC; it also serves as a KMC referral centre. An estimated number of 850 nurses are employed by the state and federal government to work in all the health facility (NPC, USAID, UKaid, 2013). However, only about 200 trained nurses and midwives are engaged in the maternal and neonatal units in Edo South senatorial district (ESMOH, 2010). It is instructive to mention here that a search for current statistics did not yield any results.

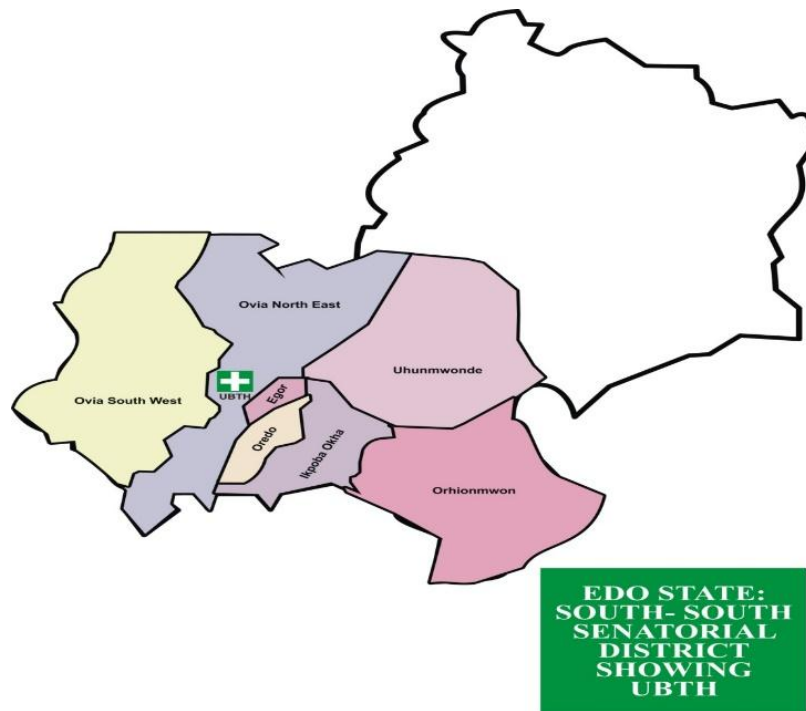
### **3.3.1 Specific context of the study**

It is important to analyse and describe the reality or context of a particular research setting in a detailed manner to make transferability of the research findings possible in another but similar context (Botes, 1992).

The context of this study was a federal government tertiary health institution—UBTH. It is located in the state capital in Ovia North East LGA and shares boundaries with UNIBEN on the south, Federal Girls' Grammar School on the east and the Benin Property Development Company (BDPA) on the north. It was established in 1974 alongside the University of Benin to serve as a training ground for medical doctors. The hospital has a bed capacity of 720 with multiple units and departments such as the Institute of Child Health, Obstetrics & Gynaecology and neurology units to mention but a few. This accounts for the institution having diverse groups of healthcare professionals, allied health workers and auxiliary staff.

The estimated number of preterm births in UBTH in 2015 was 424, the neonatal mortality was 179 while the number of mothers that practiced KMC was 180 (2015-2016 ward register /records). The NICU, popularly called Special Care Baby Unit (SCBU), has twenty-two incubators and twenty cots coupled with various forms of resuscitators and facilities for

neonatal care. This unit was accredited as a KMC centre in 2005 by the WHO and currently serves as referral centre to the hospitals in the state and its neighbours like Kogi and Delta States.



**Figure 3.3.1: Map of Edo South Senatorial District Highlighting UBTH as Study Site**

### **3.4 RESEARCH DESIGN**

Research designs are plans and procedures that the researcher sets out starting with the decision to conduct a study, through to the formation of broad assumptions to the detailed methods of data collection and analysis (Creswell, 2014). It clarifies and summarises the procedures to be followed and the conditions under which data would be collected and analysed. Therefore, research designs are intended to focus on the end-product of a study as it tries to determine beforehand what kind of study is being planned and what kind of results are being targeted (Brink, Van-Der Walt, & Van-Rensburg, 2010).

In this study, the quantitative strand was employed to explore objectives 1 to 4 with the application of a cross-sectional survey design on population one and two while the qualitative method was applied to objective 5 and 6 with an exploratory design on population three.

### **3.5 PHASE ONE: PROBLEM IDENTIFICATION**

Phase one is the empirical phase of the study that deals with the first seven objectives as previously explained in chapter one. It comprises of three populations which were chosen based on the objectives of the study. In addressing these objectives, the researcher employed the cross-sectional survey research method with exploratory, descriptive design which is explained in the following paragraphs.

#### **3.5.1 Cross-sectional Survey Design**

A cross-sectional research design is applied to collect data on more than one case or groups of participants in various stages of development in a process, at a single point in time, in order to collect a body of quantitative data in connection with two or more variables (Burns, & Grove, 2014). These are consequently analysed to describe the changes in phenomena across stages, as well as to detect patterns of association (Burns, & Grove, 2009). The cross-sectional design is based on the assumption that the "stages are part of a process that will progress over time" (Burns & Grove, 2009:244). Participants are therefore selected at various stages of development in a process, which will provide important information about the totality of the process. The process of selecting participants for the study might be related to their roles, changes in attitudes, position in the health sector or facility, an educational system, growth pattern or disease stages and so on. (Polit & Hungler, 1997; Burns & Grove, 2009).

In this study, the cross-sectional research design was used to explore and describe the practice of KMC in Edo State. Information was obtained from participants at different stages of development in the process related to their position in the healthcare delivery sector either as OHW, administrator, or parent.

### **3.5.1.1 Exploratory Descriptive Design**

Underpinning qualitative research are the two interrelated approaches of exploratory and descriptive methods. According to Polit and Beck (2013), an exploratory research design is a method of exploring an area of human experience in order to understand a person's world perception. Furthermore, it is referred to as an approach that follows an interpretative form to enable the researcher and the participants make the world visible because it involves interactions using narratives and language that convey meaning to both of them. On the other hand, the descriptive design helps to identify and understand the nature of phenomena in real-life situations, and the relationships that exists among such phenomenon. The purpose thereof is to generate new meanings and knowledge, especially in an area of limited research study.

#### **❖ *Phase 1 Research Design***

An explorative approach was applied to this phase because of its ability to discover new knowledge in an unfamiliar setting from the perspective of the OHW and the managers of the health facility or clarify some doubts or misgivings about some issues. This design gave an insight into the problem under investigation as the groups, though diverse in their roles, could be investigated as they were free to express themselves unhindered without bias or interference with different data collection tools applied. The knowledge, attitude, practice and challenges of KMC of the OHWs and the attitude and challenges of the administrators regarding KMC were

also explored. Furthermore, the socio-cultural practices that affect the uptake of KMC by the parents of preterm and LBW infants was explored.

#### ❖ *Phase 2 Research Design*

This phase equally used the explorative design to investigate the Delphi panelist in the second phase of the study. These panelists helped to authenticate the developed strategies for its applicability.

### **3.6 RESEARCH METHOD**

In this section, a detailed description of the study is highlighted and discussed in the quantitative and qualitative methods based on the population, sampling, data collection and data analysis.

#### **3.6.1 Phase One: Multi Method**

A multi method that involved data collection with the quantitative and qualitative approach was applied in this phase. Quantitative research refers to an inquiry that uses a general set of formal, orderly, systematic and disciplined procedures to acquire numeric evidence i.e. evidence that is rooted in objective reality rather than in the personal beliefs or views of the researcher (Burns & Grove, 2014). In quantitative research, evidence is gathered logically through several steps, using a pre-specified plan that applies mechanisms to control the study and formal instruments to collect the necessary information. This ensures that bias is minimized and validity and reliability of the study are maximized.

On the other hand, qualitative research is systematic, subjective approach used to describe life experiences and give them significance. It is a way to gain insights through discovering meanings (Burns & Grove, 2009: 57).

In multi method, different approaches to data collection is adopted based on the objective of the study. Data are collected simultaneously from each group as results from one method do not lead to development of questionnaire for the other (Creswell, 2014:104). This is referred to as concurrent method as there is no triangulation of data.

The purpose of utilising this method in this study was to gather data by means of different questionnaires (quantitative and qualitative) in order to answer the research objectives, as well as understand the nature of the phenomena and generate new knowledge and meaning for which no study had previously done (Burns, & Grove, 2009). Furthermore, health workers and administrators in the neonatal unit are presumed to be too busy to yield to other forms of data collection techniques; however, the qualitative method was utilised to gather information from the mothers of preterm and LBW babies.

Three populations were explored with this method, which are termed population one, two & three. Population one is the OHW, population two is the administrators while population three is the mothers of preterm and LBW infants. For these populations, different job descriptions are involved, thus they were selected based on meeting the criteria set for the study. The following sections capture the sampling methodology and population size for the three populations.

The research method is discussed in relation to the research instrument, the study population, the sampling method, the pilot study, data collection and data analysis.

### **3.7 POPULATION**

Population (N) is defined as a group of elements or cases whether individuals, objects or events that conforms to the specific criteria to which we intend to generalise results (Brink et al.,

2010; McMillan & Schumacher, 2006) while a sample (n) is a subset or portion of the total objects, persons, elements or organisation that represents the population under investigation (Bailey, 1978).

The target population for this study was divided into three main categories. Population one comprised of 58 health workers in the NICU and the public health units who are referred to as operational health workers (OHW) based on their job roles of carrying out nursing duties and giving health talks and information to mothers in the NICU and in the antenatal clinic. Population two comprises of four administrators. These are: the chief medical director of the hospital, the Director of Nursing Services and the two Assistant Directors of Nursing in charge of the NICU and the Public Health department. The third population comprises of 13 mothers of preterm infants who were admitted in the facility during the period of the study.

### **3.7.1 Population One & Two**

The quantitative method was employed to investigate the first four objectives as stated in chapter one.

#### **3.7.1.1 Sampling Technique**

The researcher used an all-inclusive method to obtain the respondents for this phase of the study. Therefore there was no form of sampling.

However, inclusive criteria were applied in determining population one and two because of the small number of participants (Burns & Grove, 2009). This method was considered fit for this study based on the assumption that the participants who possess important information required for the totality of the study and strategy development process are few, therefore, excluding or engaging in any form of sampling will further reduce the sample.

All the 57 respondents who met the criteria were included in the study, but two of them did not eventually partake in the study as they commenced their annual leave and forgot to return the completed questionnaire. Only one respondent was excluded because she had spent just four months in NIC, thus making a total of 55 respondents.

#### ***Inclusion criteria for Population One***

- ❖ All nurses in NICU who have spent more than six months in the unit.
- ❖ All public health nurses with more than six months experience on rotational basis to the NICU and antenatal clinic.

#### ***Inclusion Criteria Population Two***

- ❖ Persons in administrative care who have held such positions for at least three months.

### **3.7.1.2 Recruitment of Participants**

Participants for the study were recruited through the Chief Medical Director of the health facility chosen for the study after an application to the hospital's ethics and research committee had certified and approved the study. Access to the nurses in the NICU and Public Health Department was granted and permission was given by the unit heads on presentation of the ethics certificate. (See Appendix 12 for UBTH ethics' committee certificate).

These processes were however very difficult as it took almost four months to get ethics clearance from the teaching hospital. A delay was encountered in this process because one of the members who had just retired returned her copy of the proposal. The chairman of the committee had to source someone else to fill this vacuum. With the ethics approval on hand, an appointment was made with the Deputy Director of Nursing Services who introduced the researcher to the various unit heads where data were collected.



A comprehensive list containing the names and phone numbers of all the nurses in the two units was requested. A request was thereafter made to meet the participants in the two units after the close of their deliberations during one of the staff meetings before the weekly, regular death review of the Child Health and Public Health units. This afforded the researcher an opportunity to provide a detailed explanation of the study, as well as to seek their commitment and cooperation for the overall success of the study. Those not present at these briefings were contacted telephonically.

The importance of the study, the name of the researcher; the institution supporting the study; the participant's right to choose to participate in the study or not without any external influence, the responsibilities of the researcher towards the participant and the research study, the potential risks and benefits that could result from participation in the study, the approximate time it would take to complete the form, and the person's right to withhold information or withdraw from the study at any given time without any consequence was explained (Burns & Grove, 2009: 184; Polit, & Beck, 2013).

The information sheets and consent forms were printed and distributed in sealed envelopes by hand to all present as they volunteered to be part of the study. Opportunity was given to the staff to ask questions (See appendice7& 8). Persons not present at the meetings had the information sheet and consent form addressed by the researcher and handed to the contact persons in sealed envelopes. A total of 59 persons were thus recruited for population one & two.

### **3.7.1.3 Pilot Study**

A pilot study is “a small scale version of a full scale study”. It takes the entire study into consideration but uses a small sample of the target population in the same study setting (van Teijlingen & Hundley, 2001:1). The aim of a pilot study is to investigate the feasibility of the proposed study and to detect possible flaws in the data collection instruments. Furthermore, it enables the researcher to avoid any pitfalls in the study’s collection of data by giving insights into unexpected problems and gain experience with the data before the actual implementation of the study (Brink et al., 2010). Consequently, the researcher is able to deal with unforeseen problems such as rephrasing ambiguous instructions or wording, terminology, sequence and length of the questions.

In this study, the questionnaires were submitted for comments and suggestions to four respondents at the Igbinedion University Teaching Hospital (one of the private tertiary hospitals in Edo State). The pilot study population had similar characteristics as the study population. Recommendations were made with regard to the organisation of the items (e.g. keeping similar concepts together, so that the questionnaire can follow a logical sequence). The changes were incorporated into the surveys before the commencement of data collection.

### **3.7.1.4 Data Collection Tool**

The study used a self-administered questionnaire as the research instrument for this strand (Burns & Grove, 2009; Brink, et. al, 2010). It is a systematically prepared self-report form or document with a set of questions deliberately designed to elicit responses from respondents or research informants for the purpose of collecting data or information (Burns & Grove, 2009).

The rationale for the use of a questionnaire is based on the fact that it is difficult to collect data from staff of the NICU based on the busy and unpredictable nature of the unit which makes other methods of data collection unsuitable. Furthermore, it is cost-effective compared to face-to-face interviews, telephonic interviews or electronic questionnaires. It is easy to administer using less personnel and the researcher was able to monitor respondents and decide on the appropriate time to distribute and collect questionnaires from them (Brink, et.al, 2009).

#### ❖ **Development of the Questionnaire**

Data collection tool was a self-developed and adapted questionnaire because a reliable and validated instrument could not be sourced for this study. The adapted questionnaire was previously used by Chia et al. (2006) in Australia to investigate the attitude and practices of neonatal nurses in the use of Kangaroo care. Certain aspects of the questionnaire were modified to suit the particular objectives, design and context of the present study. Furthermore, the questionnaire was based on extensive literature relating to the objectives of the study.

#### ❖ **Format of the Questionnaire**

In preparing a questionnaire, the main source of information to the respondents is the introductory cover letter which highlights the concept under investigation that the participants will be able to refer to. Participants' willingness is to a large extent affected whether to participate in the study or not. By completing the questionnaire in the comfort of their homes or in the staff room they were able to refer to the printed document (Ary, Jacobs & Razavieh, 1990). In this study, the questionnaires were distributed by hand.

#### ❖ **Structure of the Questionnaire**

In this population, two questionnaires were used; one for the OHWs and one for administrators.

### **A. OHWs Survey**

The survey required OHWs to respond to 39 questions. It consisted of six sections; section 1 had four items which gathered information about respondents' biography; section 2 had seven items which investigated the knowledge of respondents on KMC, section 3 had nine items which focused on the attitude of OHWs on KMC; section 4 had five questions that focused on the practice of KMC while section 5 had ten questions regarding the challenges encountered. The last section dealt with the suggestions respondents gave to mediate the challenges they encounter in KMC practice (See Appendix 1 for an example of the OHW survey).

### **B. Administrators' Survey**

This questionnaire required administrators to respond to 42 questions. It consisted of four sections; section 1 had five items that gathered information about the respondents' biographical data; section 2 had ten items which investigated the attitude of administrators towards KMC; section 3 had twelve questions which focused on the challenges encountered by managers. The last section provided a blank space for respondents to make suggestions on ways to mediate challenges encountered (See Appendix 2 for an example of the administrators' survey).

#### **3.7.1.5 Data Collection Process**

##### **❖ OHW**

Questionnaires were delivered personally by hand in sealed envelopes to the participants after the day's duty and handover to the afternoon shift in the nurses' break room. This afforded the researcher the opportunity to meet a sizeable number of staff members. For those on night duty or off duty, the unit heads agreed to assist in soliciting for their cooperation and participation in the study. A contact person from each unit (NIU & Public Health) was thereafter assigned by the unit heads to work with the researcher. The questionnaire and the cover letters which

contained a detailed information sheet and the consent form were handed to the contact person in sealed envelopes, who in turn distributed and retrieved the duly completed questionnaire, except for two persons who commenced their annual leave and forgot to submit their completed questionnaire.

#### ❖ **Administrators**

The data collection process for the administrators required handing out the information sheet, consent form and questionnaire to them personally in their respective offices. A due date for retrieval was indicated by them which they actually adhered to.

#### **3.7.1.6 Data Analysis**

The researcher was assisted by the Statistical Consultancy Services Department of the UWC to transfer the data from the questionnaires into the Statistical Package for Social Science (SPSS 24), after it was initially entered into Microsoft Excel to double check for errors. Where discrepancies were noted, the original questionnaire was traced by means of its unique identification number and the data entry item was corrected accordingly.

The analysis was done by the researcher with the assistance of the statistical coach by means of the application of SPSS (version 24) software programme. The results were reported in descriptive and inferential statistics in frequencies (f), means (M), percentages (%) and standard deviation (Brink et al., 2010b:172).

The two open-ended questions on each questionnaire to the OHW and administrators were analysed by means of content analysis which is discussed in the analysis and interpretation of data in the next chapter.

### **3.7.1.7 Validity of the Questionnaires**

#### **❖ Content Validity**

Content validity examines the extent to which the method of measurement covers the scope and range of the information that the researcher requires (Brink et al., 2010b; Burns & Grove, 2009).

Validity was ensured in this study as the questions were based on an extensive literature review which focused on KMC uptake and implementation in Edo State in particular and Nigeria in general. Consultations were conducted with experts in the field of neonatology and neonatal nursing, as well as with a faculty member in the Department of Nursing Science in the University of Benin. Furthermore, the researcher conducted a pilot study with a population that had similar characteristics as the study population to ensure that participants understood the constructs and terminology of the questionnaires in the study. The findings from the literature review and suggestions from the pilot study were incorporated in the final questionnaires, in consultation with the supervisor and the Statistical Consultancy Department of UWC. In furtherance to this, representativeness of the persons involved in neonatal care added credence to the questionnaires by the use of an all-inclusive method of sampling which ensured that the conclusions generated from the research findings were valid scientific knowledge.

### **3.7.1.8 Reliability of the Questionnaire**

Reliability is the proportion of probable errors in a measured score that is due to errors in the true score (Roberts & Priest, 2010). It refers to the internal consistency of question items within a specific category or the consistency of results obtained in the repeated use of a particular instrument over time (Burns & Grove, 2009).

The questionnaires in this study were based on extensive literature search and some aspects were adapted from Chia, Sellick and Gan (2006). It was reconstructed based on the objectives of the study to enable measurement of individual questions by the use of statistical procedure of the Cronbach's Alpha Coefficient as depicted in the table below (Cronbach, 1951).

**Table 3.7.1.8: Cronbach Alpha Co-efficient for Questionnaires in the Phase 1**

Phase one	Questionnaire Section	OHWs' Survey	Administrators' Survey
		Coefficient	Coefficient
	Section: 1	NA	NA
	Section: 2	0.90	0.95
	Section: 3	0.87	0.96
	Section: 4	0.81	NA
	Section: 5	N/A	--

Table 3.7.1.8 shows the reliability values of the questionnaires. The entire domains recorded values greater than 0.05 which is an indication of high reliability because they are all close to 1.0.

### 3.7.2 Population Three

As stated previously, the qualitative method which is a systematic, subjective approach used to describe life experiences and gain insights through discovering meanings was adopted for this population (Burns & Grove, 2009: 57).

#### 3.7.2.1 Population Size

This population comprised of all the mothers of preterm/LBW infants admitted into the health facility during the data collection period. They include mothers who had their babies in the facility or those who are referred from other secondary, PHCc or neighboring state of Kogi or Delta.

### 3.7.2.2 Sampling Technique

Choosing a study sample is an important step in any research project. The aim of qualitative sampling is not to draw a representative sample from the study population, but to throw some light into the complex picture for ease of understanding of the complex social issues that are most useful for answering humanistic ‘why?’ and ‘how?’ questions (McMillan & Schumacher, 2006).

In this study, the selection of the participants occurred through a purposive sampling technique because it allowed for selecting information-rich cases since informants were selected on the basis of their ability to provide answers to the objective of the study. In this instance, the researcher selected participants based on some inclusion criteria and her personal judgment depending which participants would provide the needed information. Only participants who had experience with preterm babies and KMC practice could share useful information and were therefore selected based on some inclusion criteria.

#### Inclusion criteria

- ❖ Mothers whose babies were admitted at the study site.
- ❖ Mothers of preterm infants who had practiced KMC for more than 30 minutes on three or more consecutive times or days.
- ❖ Mothers who had preterm or LBW babies before the recent delivery but did not practice KMC.
- ❖ Mothers of preterm infants who are able to communicate in “broken/ Pidgin” English.

#### Exclusion Criteria

- ❖ Mothers with full-term babies weighing more than 2kg.



- ❖ Mothers with discharged babies and visiting the unit on appointment to see the paediatrician.

### **3.7.2.3 Sample Size**

Sample size in qualitative research implies data saturation as espoused by Burns and Grove (2014). In this study, thirteen mothers of preterm/LBW infants were interviewed and saturation was achieved after the 12<sup>th</sup> respondent when a pattern of data repetition emerged. This means that the researcher reached a point where the process did not yield new information, indicating that the researcher experienced a sense of closure.

### **3.7.2.4 Recruitment of Participants**

As previously explained, access to the health facility was granted following the hospital ethics approval. Participants were recruited for individual interviews by the researcher with the assistance of the unit head who helped to identify mothers who had been practicing KMC or those about to commence. The researcher was introduced to the mothers and the reason for her presence in the unit; this was followed by a detailed explanation of what the study entails. The researcher also outlined the ethical issues of confidentiality and anonymity, the method of data collection as well as the right to self-determination. Opportunity was given to the mothers to ask questions about the study. Thereafter, their cooperation and participation as solicited and were assured by the mothers. The researcher then scheduled appointments with them, scheduling each participant for different days and for a time based on their preference.

### **3.7.2.5 Trial Run**

Pre-testing qualitative instruments are important to improve validity (Bowden, Fox-Rushby & Nyandieka, 2002) A trial run of the interview guide was conducted on three mothers of

preterm infants from the study site who were visiting the unit with their baby for follow-up after discharge because no other known health facility in the state practices KMC. This helped the researcher to identify the misunderstandings of different questions. It equally helped to determine if there were limitations or other weaknesses in the interview design (Bowden, Fox-Rushby & Nyandieka, 2002; Oyedunni, Arulogun, Owolabi, Ezine & Warth, 2015). Furthermore, the trial run assisted in becoming familiar with the scope of the research and the time it would take, as well as allowing the researcher to refine the research questions, such as adjusting the concept and wording and working out any procedural problems. Based on the result of the trial run, some of the wordings were corrected for clarity and understanding, for example many mothers simply refer to KMC as “kangaroo” or “kangaroo care”. There were no further change after this adjustment. The lingua franca in Nigeria is the English language with an abridged version called “Pidgin or Broken English’. This is spoken and understood by the majority; hence, the trial run was conducted in English language.

#### **3.7.2.6 Data collection method**

In a multi-method approach, data collection techniques are planned as part of the research design. The quality of data collection techniques defines the accuracy of research conclusions, and data collection procedures are equally critical (Brink et al., 2010). In this study, semi-structured interviews with open-ended questions were utilised to understand the effect of socio-cultural influences on KMC uptake. This method was selected because the researcher wanted to have personal and informal interaction with the mothers, some of whom may not be literate to complete a questionnaire. Furthermore, it provided a basis for asking all the participants the same questions, though with little variations as the situation demanded based on their experiences about the KMC. This made it possible to access a more detailed and wider perspective for understanding the subject under investigation. By using predetermined open-

ended interview questions, the researcher was able to probe for more elaboration of issues throughout the discussions.

### **3.7.2.7 Developing an Interview Guide**

Interviewing is a process of verbal communication between the researcher and the participants for the purpose of collecting thick and rich data from participants in various settings (Creswell, 2014:194). In-depth interviews are open-ended questions to obtain data of participants' meaning -that is the meaning they ascribe to their world and how they make sense of important events (McMillan & Schumacher, 2006). Semi-structured interviews with open-ended questions were utilised, which allowed for free expression of experiences on KMC practice.

Designing the interview guide followed the principles of a more general and structured nature to more specific questions. The interview guide questions allowed respondents to refer to virtually any aspect of the general stimulus identified in the question (Shamdasani & Stewart, 2013). Thus more significant questions were placed last and less significant questions at the beginning to allow for rapport and relaxation of the participants (although the researcher acknowledges that it is sometimes difficult to exercise judgment between what is more or less important).

Questions were constructed for an effective semi-structured interview process and to allow for adequate narration of participants' experiences. They were brief, precise, neutral and open ended, which allowed the researcher access to information that had not been anticipated, but it was flexible in that it allowed both the interviewer and the interviewee to diverge from the questions in order to pursue an idea/issue or to provide a detailed explanation. Questions were developed directly from the research questions that were the focus for the research. A preliminary interview guide was developed through consultation with experts in neonatology

and information and communication to enable inclusion of relevant questions and the skill to conduct same. Modifications were incorporated into the final interview guide after the trial run. The purpose of an interview guide was to provide direction of the conversation towards the topic and the sequence of issues under investigation. Furthermore, it helped to pose questions and how to do a follow up on them.

The interview guide (Appendix 3) consisted of key questions that defined areas of interest that needed to be explored. Although these questions guided the interview, there was some form of flexibility since the interviewer asked questions prompted by the participants' experiences shared, but the flexibility ensured that adequate information needed was collected (McNamara, 2009).

#### **3.7.2.8 Data Collection Process**

The selected participants were informed prior to the day and time by the researcher and the unit manager helped to prepare them and was also responsible for getting the room ready for the exercise. The venue of the interview was at the KMC room located to the extreme left-hand corner of the neonatal ward. This room also doubles as a lecture room for medical students. All the interviews were conducted in this room during weekdays except for two others that took place in a private room inside the NICU and the lounge of the maternity ward (M2) after the morning or afternoon routines.

Before the commencement of the interview, the researcher ensured that the setting was conducive and free from interruptions. Although the room was within the structure, it is out of earshot of other people, with no distractions. Thus the participants felt comfortable to share their experiences without fear of any eavesdropping. The room had a table and two chairs

which allowed for face-to-face interaction that facilitated observation and enhanced interaction. All participants were welcomed by the researcher and were encouraged to relax and feel at ease as the exercise was not an examination. Before the commencement of the interview, the researcher introduced herself and explained the purpose of the interview; she also explained that the interview would be recorded for the purpose of capturing the information, and that anonymity of the participants, as well as information were guaranteed. The consent forms and the information sheet were collected after it was duly signed. Permission to be recorded was sought and participants obliged. The recorder was prepared before the recording and extra batteries were made available.

Thereafter, the researcher started to pose the questions for participants to respond. The participants were asked about their general bio-data, parity and the gestational age of their baby at delivery. She then moved to how they got to know about KMC, the socio cultural practices regarding infant care and KMC practice. Questions were brief, precise, neutral and open-ended, which allowed the researcher access to information that had not been anticipated, since participants were able to provide adequate information. Although these questions guided the interview, some flexibility allowed the interviewer to ask additional questions prompted by the participants' experiences shared, but the flexibility also ensured that adequate information needed was collected (McNamara, 2009). The flexibility in interviewing mothers of preterm infants allowed for probing and clarification of experiences (Polit & Beck, 2013).

The interviews were held in the Queen's English and Pidgin English (a local form of Queen's English spoken and understood by almost every Nigerian citizen). It did not take longer than 45 minutes to conduct the interview, but some were longer and lasted close to an hour because the

researcher realised that some of the participants saw the interview as an opportunity to interact with a healthcare professional about their challenges regarding KMC.

The interviewer's listening skills were essential in identifying emerging issues that had not been considered earlier yet were applicable to the research (Maree, 2010). Probing questions enabled a better understanding of the experiences, thereby providing a more involved experience (Merriam, 2014). The interview progressed to the challenges experienced with KMC. In the final aspect, participants were urged to make suggestions on how to improve KMC practice.

While the participants did most of the talking, the researcher listened to responses, and jotted down notes. The researcher was attentive to the responses in order to identify the new emerging lines of inquiry that were directly related to the phenomenon being studied, and further explored these through probes. When the participants diverted from the main question asked to other aspects that were not related to the study, the researcher guided them back to the focus of the interview. However, the researcher allowed free expression of the participants' experiences without being judgmental or avoiding any leading questions about their answers by taking the neutral researcher role. Non-verbal communication, such as the facial expression and tone of voice were also noted.

As a measure of good interviewing procedure, the researcher went back to the participants to verify whether the researcher understood what they shared with her and what they meant (Bowden, Fox-Rushby & Nyandieka, 2002). This is referred to as member checking. Furthermore, the use of interim data analysis helps to determine whether data saturation has been achieved and to be good listener (Bowden, et al, 2002; Creswell, 2009).

In this study, the researcher ensured she paraphrased and read the participants' responses back to them to ensure that they have the same understanding of the issue that were discussed.

To facilitate the interview and encourage the participants to feel free to talk, the following communication techniques as described by Polit and Beck (2012) were used:

- ❖ repetition of the original question;
- ❖ silent probe, where the researcher maintains a long pause that is communicated as an indication that the participant should continue because the moderator is listening;
- ❖ use of complementary questions that are not directive and open-ended. For example “what do you think their laughter implied? Will this discourage you from practicing KC?
- ❖ use of affirmative comments such as “Uh-Hum” and “Okay”.

Field notes were written during and after each interview and attached to the corresponding recordings. Written notes taken during qualitative approaches or written immediately after data collection, are reported as being superior to the exclusive use of audio recordings that are transcribed verbatim (Wengraf, 2001).

#### ❖ **Field Notes**

Field notes are notes jotted down during the process of data collection. Their main purpose is to record points or issues that cannot be captured on tape during an interview (Appendix 8). According to Creswell (2014:152), writing of field notes should follow the following format:

- ❖ Descriptive notes: reports on the personal features or descriptions of the participants. It describes the physical setting, the interviewer's account of particular events that occurred and activities that took place during the interview.

- ❖ Reflective notes: records of personal thoughts such as feelings, special incidents, and problems encountered during an interview, ideas generated during the process, impressions and prejudices.
- ❖ Demographic notes: information regarding the time, place and date to describe the physical setting where the interview had taken place.

### **3.7.2.9 Data Analysis**

In this strand, data was analysed by following the method of open coding as described by Tesch (1990). Descriptive coding technique for data analysis was used and it includes the following steps for data analysis and guidance for the coding process.

Data validation was initially carried out as a measure of good practice in interviewing by going back to the participants to verify whether the researcher understood what they shared with her and what they meant (member checking). Furthermore, the use of interim data analysis helped to determine whether data saturation has been achieved and to be good listener (Creswell, 2009). The researcher paraphrased and read the participants responses back to them to ensure that they have the same understanding of the issue that were discussed.

- ❖ Transcription and analysis were personally done by the researcher and completed concurrently for each interview.
- ❖ Meticulous readings were conducted to filter and clean the data to familiarise and immerse self in the data to ensure that the participant became the focus of analysis.
- ❖ The huge volume of data was condensed and categorised to a manageable size.
- ❖ The researcher referred to a code book and ideas were jotted down as they occurred to the researcher.
- ❖ Each transcript was read and re-read to gain insight into participants' experiences and questions were asked, such as "What does it mean?" and "What is this statement



about?” to enable the researcher to arrive at a description of the participants’ feelings and words in order to make meaning of them.

- ❖ The interview data were coded with letters and colours and grouped according to each participant’s identification.
- ❖ A code was assigned to individual text and sentence or line numbering was allocated to text, which enabled the researcher to trace back from which text the data was extracted. Codes served as pointers to the data set and to ascertain the variety of ideas mentioned in the data as they assisted the researcher to identify areas with important issues and also facilitated retrieval.
- ❖ Development of the themes was done by immersion in the data to understand and seek further explanation to generate themes.

Field notes served as points of reference coupled with an experienced independent coder to code the data after which a consensus discussion took place that added credibility to the study.

### **3.8 PHASE TWO: STRATEGY DEVELOPMENT**

This phase addresses the main objective of the study which is aimed at developing strategies for the early implementation of KMC guidelines in Edo State, Nigeria.

#### **3.8.1 Research Design**

As earlier indicated in this study, the explorative research design was applied to investigate the Delphi panelist in this second phase of the study using the quantitative approach. These panelists helped to authenticate the developed strategies for its applicability. The development of the strategy was based on the findings in phase one through conclusion statements and the TQM philosophy as espoused by Tenner & De Toro, (1992:33). The researcher used inductive and deductive logic to formulate the draft strategy following Pearce and Robinson (2000)

strategy development process as detailed in chapter 6 of this study. Subsequently, the Delphi method was used to develop the final strategy which was the main aim of this study.

### **3.8.2 Research Method: The Delphi**

The Delphi technique is a method of collecting opinion on a particular topic. It is based on the premise that pooled intelligence enhances individual judgment and captures the collective opinion of a group of experts without being physically assembled (De Villiers, De Villiers, & Kent, 2005; Linstone & Turoff, 2002). The Delphi is mostly used when the required advice sought is informed judgment. “The value of the method rests with the ideas it generates, whether the end result is consensus or not, the arguments for the extreme positions also represent a useful product”(Gordon, 1994:4).

#### **3.8.2.1 Types of Delphi**

The Delphi process can be either quantitative, qualitative or both. The various types have further been clustered together into three and referred to as conventional or classical, real-time or modified and policy Delphi (De Villiers et al., 2005; McKenna, 1994).

❖ *The conventional Delphi or classical Delphi* refers to the classical forum for the prioritisation of facts. It consists of a questionnaire sent out to a group of experts, with a second questionnaire based on the results of the first. Responses to the questionnaires are anonymous with the participants known only to the researchers but not necessarily to the other participants (Kemp & Avella, 2016).

❖ *The real-time or modified Delphi* requires that panelists meet face to face as a group with an experienced moderator to handle the session. It is a shorter variant and the process takes place during the course of a meeting, using mechanisms to immediately summarise responses from the respondents. Developing and understanding a subject

and the fact that participants should possess knowledge are central to this Delphi method since it represents key features in qualitative research (Hallowell & Gambatese, 2009; Murry & Hammons, 1995).

- ❖ *The policy Delphi* is when the aim is to devise a strategy to address a specific problem. It entails the constitution of a forum for ideas where the decision maker (or researcher) is interested in having an informed group present options and supporting evidence rather than having the group reach a consensus (Kemp & Avella, 2016; Linstone & Turoff, 2002). The conventional Delphi was used in this study because it has the ability to collect information from a range of experts and panelists in different locations who can be included anonymously thus avoiding dominance by one member. The researcher believes that ideas generated by these experts and stakeholders are rigorous and can contribute significantly to broadening knowledge within the nursing profession towards a final decision that will lead to the creation of a sustainable and verifiable document.

### **3.8.3 POPULATION**

Potential participants in a Delphi method are identified before commencement of the process (Hasson & Keeney, 2011). The population are persons whom the researcher assumes to possess the information required to which there is no specific number or size but must be broad enough to take care of all aspects of discipline to provide the needed information (Kemp & Avella, 2016). The population for this study were eleven experts and persons in the field of neonatology, obstetrics and gynaecology, administration and nursing education.

### 3.8.4 SAMPLING TECHNIQUE

The purposive sampling technique was applied to achieve this aim because it assisted the researcher to select participants that can provide rich information. Eleven panelists comprising of 10 experts panelists in the field of neonatology, child health, obstetrics and gynaecology and administration and 1 mother of a preterm infant who participated in phase one of the study were selected.

**Table 3.8.4: Affiliation of the Delphi Panelists**

No.	Discipline	Skill	Organisation
2	Medical Practitioner	Neonatology/Child health.	Tertiary health institution.
1	Medical Practitioner	Obstetrics & Gynaecology.	Tertiary health institution.
1	Chief Medical Director of the hospital	Administration.	Tertiary health institution.
1	Assistant Director of Nursing Services	Nursing Administration.	Tertiary health institution.
1	Assistant Director of Nursing Services (ADNS (NICU)	Neonatal Nursing /Management.	Tertiary health institution.
1	ADNS (Public Health unit).	Public Health Management.	Tertiary health institution.
1	Operational health worker (NICU)	Facilitation of KMC.	Tertiary health institution.
1	Nurse faculty.	Curriculum & training.	Tertiary health institution.
1	Mother of a preterm infant.	Experience in KMC.	Tertiary health institution.
1	State Director of Nursing Services.	Administration.	Public servant
TOTAL 11			

Table 3.8.4 show the affiliation of the panelists. Though majority of them are employed in health institutions, they were selected from different disciplines to critically appraise the document that was developed.

### **3.8.4.1 Recruitment**

Having identified the panelists, their addresses and contact phone numbers, e-mails and official physical contact addresses were obtained. Their availability and willingness to serve on the panel were solicited. Personal contact was made but in some cases the panelists did not require the researcher's physical presence as some were satisfied with the information received through electronic media, while others wanted both hard and soft copies. This expedited the process and reduced dropout rates. The selection was based on the following criteria:

#### ***Inclusion Criteria***

- ❖ Staff in the administrative cadre with work experience of more than one year;
- ❖ Head of unit or consultant in neonatology, obstetrics and gynaecology (expertise is determined by position held previously and at present);
- ❖ Those who have the time and are willing to partake in the study;
- ❖ Those in any a management cadre with more than six months experience;
- ❖ Nurse faculty member with paediatric background;
- ❖ OHW in the neonatal unit with more than one year working experience;
- ❖ A woman whose child had been admitted previously in the NICU or who had participated in phase one interview data collection process.

#### ***Exclusion criteria***

Those who do not fit into any of the above criteria.

### **3.8.5 Data Collection Tool**

Similar to the conventional Delphi, a self-administered questionnaire was used for data collection.

### **3.8.5.1 Development of the Questionnaire**

A summary of conclusion statements from the 43 problems identified in phase one, lead to development of five objectives through inductive and deductive logic reasoning (See paragraph 6.1.4.10) and attached draft objectives, functional and tactical actions). These were translated into aims and performance objectives backed by the six TQMe principles that served as a framework to guide the development of the strategies. Performance objectives were stated in the form of tactical actions and expected outcomes for interventions to achieve adoption, implementation and sustainability of the strategies that would enhance the implementation of early KMC guidelines in health facilities in Edo State, Nigeria.

### **3.8.5.2 Format of the Questionnaire**

The first draft of the intervention strategies was developed by the researcher based on the identified results and conclusion statements drawn in phase one. A sixty-five (65) item questionnaire was developed from the performance objectives of the TQMe philosophy. The vision and mission statements for the OHWs were developed from the stated vision and mission statements of the FMOH, the UBTH, and the NANNM. This enabled aims and objectives to be created which laid the foundation for the questions posed in the questionnaire to the panelists.

The initial questionnaire was divided into two documents. The first document contained the draft overview of the research problem and its findings, while the second document was the questionnaire proper. The questionnaire was divided into two sections: Section “A” asked questions about the demographics of the panelists. Section “B” requested inputs from the panelists about the primitive strategy in a quantitative and open-ended-question format, which required panelists to comment and motivate regarding the scores they assigned to each domain,

especially if those scores fell below 75%. Comments were also solicited on the overall strategic document. This served as baseline for the next phases that were formulated in open-ended questions using a Likert scale of 5 with ratings of: 5= strongly agree, 4 = agree, 3= strongly disagree, 2= disagree and 1= Neutral.

### 3.8.5.3 Pilot Study

After drafting the questionnaire, it was given to three independent staff members (a staff nurse/midwife in the ANC, a senior consultant in child health and a paediatric nurse who had worked in the NICU). They made contributions on the aspect of the voluminous nature of the draft document and its technical nature irrespective of whether panelists were in the medical profession or not; since it could be a hindrance to its return rate. These suggestions helped in reducing the size of the document and reframing the questions.

### 3.8.5.4 Reliability Result of Pilot Study

Table 3.8.5.4: Reliability result of pilot study

Item	Reliability score	No of items
Vision statement	.889	4
Mission statement	.838	7
Principle	.982	4
Value statement	.982	4
Objective 1	.767	4
Objective 2	.761	4
Objective 3	.821	4
Objective 4	.857	4
Objective 5	.923	4

Table 3.8.5.4 shows the Cronbachs' Alpha analysis of the pilot study. It indicates that the figures are all above 0.5 and close to 1, thus indicating a high reliability of the tool.

### 3.8.6 Data Collection Process

The panelists determined a data collection process as previously agreed on by them.

The information sheet and consent form were sent prior to the commencement of the study and the experts agreed to serve on the panel. They were made to indicate their preference on how they would like to receive their questionnaire. This expedited the process and reduced dropout rates. It is instructive to mention here that the mother of a preterm infant who was chosen for this study is literate and is a teacher by profession who holds a National Certificate in Education. The researcher did not encounter any problem in terms of her understanding her role and requirements for participation in the study. In instances of lack of immediate response, follow-up phone calls were made to panelists as a reminder.

### **3.8.7 Data Collection Technique**

Data collection method in a Delphi technique is called rounds (Hasson & Keeney, 2011). In this phase, data collection occurred in three rounds:

**Round 1:** This process began with a quantitative and an open-ended questionnaire which served as the cornerstone for soliciting specific information from the experts/panelists. Their input and opinions were sought regarding the authenticity, applicability and measurability of the objectives and action plans for KMC implementation with a sixty-five (65) item close-ended and open-ended questionnaire.

Data from the first round was analysed using SPSS (version 24) software programme while the qualitative aspect was arranged according to the themes that arose from each panelist's recommendations and classified quantitatively for content analysis techniques (Hasson & Keeney, 2011). Where several different terms were used for what appears to be the same issue, the researcher grouped them together to provide a universal description. These descriptions and



grouping systems were verified to ensure that the data are fairly represented. No items were added during analysis and the wording used by panelists were maintained with minor editing.

The quantitative analysis allowed for median and modal answers to be discovered. Consensus was defined as 75% or more of the respondents' agreement with a statement in all domains.

**Round 2:** This was the second phase of data collection in which each Delphi participant received a second questionnaire for review where the list for the items, their ratings, minority opinions, and items which achieved consensus was distributed. They were asked to review the items summarised by the researcher based on the information provided in the first round.

Ascertaining the level of collective opinion was determined by means of descriptive and inferential statistics. The data from the ratings of the items to be analysed were conducted by producing statistical summaries for each item. Measures of central tendencies (means, medians and mode) and levels of dispersion (standard deviation) were computed to provide participants with information about pooled opinions. This enabled participants to gauge their response in relation to that of the group.

**Round 3:** This was the final round where all the items which achieved consensus were distributed to the panelists. This round provided a final opportunity for participants to revise their judgments. A consensus agreement of 75% on all domains formed the basis for acceptance of the opinion of the panelists. None of the panelists reviewed their responses further (McKenna, 1994).

### **3.8.7.1 Response Rate**

As is common in Delphi studies that record high attrition rate, only one panelist out of the initial eleven could not serve on the panel as planned (Green, 2014). This was the CMD of the hospital who completed his tenure and was replaced. His successor was too busy to assist the researcher. The Deputy Chief Medical Administrative (DCMAC) who was delegated by the new CMD to act on his behalf did not respond to his emails, phone calls or text messages after the first meeting with the researcher. The response rate was thus 91%.

### **3.8.8 Data Analysis**

Data was analysed using both quantitative and qualitative methods as the responses contained suggestions made by the respondents which were summarized and interpreted based on similar themes.

#### **3.8.8.1 Analysis of Round One Data**

Eleven questionnaires were distributed with ten duly completed and returned, giving a response rate of 91%.

The questionnaire from the panelists was first given a code number for identification before entry into the computer (Microsoft Excel) for analysis by means of SPSS (version 24) software programme. Where discrepancies were noted, the original questionnaire was traced by means of its unique identification number and corrected accordingly.

The data was interpreted through descriptive analysis by an initial conversion of the scores into percentages and reported in measures of central tendencies e.g. frequencies (f), median and mode

The qualitative aspect was grouped according to the categories and themes that arose from each statement and reported accordingly.

The second and third questionnaire were analysed in the measures of central tendency alone because there was no qualitative aspect.

### **3.8.9 Validity of the Questionnaire**

Content validity was ensured as the questionnaires were based on problems identified in phase 1 and literature search using the TQMe philosophy. Consultations were conducted with experts in the fields of neonatology and neonatal nursing and paediatrics. Furthermore, the researcher conducted a pilot study with a population with similar characteristics as the study population whose suggestions were incorporated into the final questionnaire. Consultation with the supervisor and the statistician as well as diligent and rigorous selection of panelists who are experts in their chosen field lend credence to the tool.

### **3.8.10 Reliability of the Questionnaire**

A self-developed questionnaire based on the objective of this phase was constructed by the researcher in consultation with experts, including a statistician to enhance measurement by means of Cronbach's alpha. This yielded values that were higher than 0.5.

## **3.9 SCIENTIFIC RIGOUR**

Health research must be of a high standard using sound methodology that will answer the posed research questions, in addition to being grounded in literature and open to peer review (FMOH, 2007). The planning, implementation, analysis and reporting of this research were grounded in literature and was conducted at the highest standard possible; with every step of the research

process being documented in detail, so that peer review and evaluation of the entire process would be possible.

Plagiarism, another important aspect of scientific integrity is described as the presentation of someone else's ideas or work as your own new, original work (Coetzee, 2010; Burns & Grove, 2009; FMOH, 2007). Plagiarism was excluded in this research by correctly referencing sources, both in the written text and bibliography of the study. Furthermore, direct quotations were explicitly identified as such and were limited through the scientific use of paraphrasing and summarising.

### **3.9.1 Measures in Quantitative Study**

Measures of rigour in the quantitative strand will be discussed in terms of terms of validity and reliability.

#### **❖ Validity**

The validity of an instrument is a determination of the extent to which the instrument adequately measures what it is intended to measure and the integrity of the result generated from it (Burns & Grove, 2009:59).

**Construct validity** refers to the ability of an instrument to measure all the major elements relevant to the construct being measured (Polit, & Beck, 2013:195). In this study, construct validity was maintained by examining empirical evidence of each of the constructs that pertains to the nature of the knowledge, attitude, and challenges in KMC of the OHWs, administrators and mothers of preterm infants and by developing vision and mission statements to form strategies.

**Content validity** examines the extent to which the method of measurement covers the scope and range of the information that is sought (Burns & Grove, 2009:720). In this study, content validity was ensured through an extensive literature review and consultation of experts. Furthermore, the researcher conducted a pilot study with a pilot study population that had similar characteristics as the study population to ensure that participants would understand the constructs and terminology of the questionnaires in the Nigerian context. The findings from literature review and suggestions from pilot studies were incorporated into the final questionnaires in consultation with the supervisor who is an expert in public health management and the Statistical Consultancy Department of UWC. Content validity of the study was also ensured through the representativeness of the sample of the OHW and administrators by an all-inclusive criteria to ensure conclusions generated from the research findings were valid scientific knowledge.

### **3.9.2 Measures in Qualitative Study**

Rigour in qualitative study is measured in terms of the sincerity of the researcher in collecting data, as well as the quality of data. Consequently, rigour relates to credibility, confirmability, transferability and dependability (Patel, 2009). Trustworthiness ensures scientific rigour in qualitative research without sacrificing relevance (Guba & Lincoln, 1998)

#### **❖ Credibility**

Credibility refers to the “adequate representation of the constructions of the social world under study” (Bradley, Harding, Rippon & Mathews, 1993: 436). Prolonged engagement in the field, persistent observation, checking interpretations against raw data, and member checking were used to ensure credibility of the study as the researcher ensured the recordings were played back to the participants to confirm their correctness of what was captured, as well as paraphrasing the participants’ statements.

### ❖ **Confirmability**

Confirmability is the ability of research findings to be confirmed by other researchers (Guba & Lincoln, 1998). The researcher also has to make meaning of the phenomenon under investigation from the participant's point of view, as well as have the ability of understanding the meaning of participants' experiences in the context of the study (Jensen, Meyer, & Sternberger, 2009).

In this study, confirmability was attained when the research results represented a precise account of the experiences with KMC of mothers of preterm infants. This was made possible by going through the channels of data collection. An audit which aims at illustrating the clear thought processes as well as evidence that establishes conclusions in a research is a requirement for all qualitative studies.

In this study, the researcher kept a record of events associated with the study over time and documented all the processes of the study, which can easily be followed by anyone interested and still obtain similar results.

Self-reflexivity, an important part of any research, reflects and examines the assumptions made in the study. These assumptions may reflect on methodology, data analysis or interpretation of data. The researcher ensured self-reflection by immersing herself in the data analysis process to enable her to gain knowledge about the plight of mothers of preterm infants.

### ❖ **Transferability**

Transferability refers to the extent to which the researcher's working hypothesis can be applied to another context (Graneheim & Lundman, 2004). The goal is to provide extensive information on the fieldwork which could help generalisation of the collected data to other groups of people and/or settings. The researcher achieved transferability in this study by

presenting a ‘thick’ description of the participants, the context and the setting of the research study.

#### ❖ **Dependability**

Dependability refers to “the coherence of the internal process and the way the researcher accounts for changing conditions in the phenomena” is the state of data consistency over time (Graneheim & Lundman, 2004:105). Dependability in qualitative research aims at ensuring consistent results of a study which could easily be verified by another researcher in a different but similar context or setting. In this study, dependability was achieved through ensuring data consistency and usability. The researcher demonstrates the truthfulness of the data collected and analysed by presenting it as is. Dependability puts emphasis on the need for the researcher to describe any changing context within which the research occurs. In furtherance to this, dependability was also achieved through external audits. External audit is the process of examining data processes of a research study. The main purpose of an external audit is to evaluate accuracy and applicability of the research findings.

In this study, external audit was conducted by the supervisor through frequent checks at every stage of the research process and the transcribed data. Furthermore, an independent coder was assigned by UWC Post-graduate School to code the transcribed data and findings were then presented to the supervisor.

### **3.10 ETHICAL CONSIDERATION**

All research that focuses primarily on human beings must be of a high standard that protects the rights of the participants. The principles of beneficence, respect for persons and justice are the fundamental ethical principles in research, that function to protect the participants' human

rights of self-determination, privacy, anonymity, confidentiality, fair treatment and protection from discomfort and harm (Burns & Grove, 2014; FMOH, 2007).

### **3.10.1 Principle of Beneficence**

The principle of beneficence can be described as doing “good” and preventing harm, which may be physical, emotional, spiritual, social, economic or legal. The researcher has a responsibility to conduct research that will protect participants from discomfort and harm while bringing about the greatest possible benefits and minimising all risks involved in the research (Brink et al., 2010; Burns & Grove, 2009; FMOH, 2007). In this study, the researcher did not envisage any harm in the process of research but there could have been some form of psychological distress in the process of discussing experiences with others. Participants were protected from physical and psychological harm since careful thought was given to avoid intrusion into the participants’ well-being. The researcher made a sincere effort to support participants who were observed to be distressed from their tone of voice, gesticulations and body language by discontinuing or avoiding questions that lead to such reactions. The researcher’s and the supervisor’s contact phone numbers and email addresses were made available should the participant required further clarification.

#### **❖ Freedom from Exploitation**

The researcher has the responsibility to ensure that the participant is not placed in a disadvantaged position, is not exposed to a situation for which he/she is unprepared and is not exploited in any way (Polit & Beck, 2013). In this study, the researcher ensured freedom from exploitation by personally informing the participants of the nature and purpose of the research and assuring the participant of his/her voluntary participation. There was no form of coercion by the researcher or the ward managers on the participants. They were assured that all



information shared with the researcher during the study will not be used against him/her or his/her respective nursing department/unit in the hospital either as a staff member or parent seeking care in any way.

#### ❖ **Risk Benefit Ratio**

The researcher has the responsibility to carefully envisage the outcome of the study, as well as determine the inherent risks and benefits in the research study. Equipped with this information, the researcher can then aim to maximise the benefits of the research, while minimising the risks of the study (FMOH, 2007).

While agreeing to the fact that investigations that entail divulging personal information may result in some emotional discomfort, there were no foreseeable physical, emotional, spiritual, social, economic or legal risks involved in this study except for the time that each individual invested in the completion of the questionnaire and granting interviews. Although some mothers of preterm babies recalled with nostalgia the emotional trauma that accompanied the preterm delivery, such moments were transient as they quickly expressed joy at seeing the progressive change in the infants' health coupled with the researchers' empathic understanding of their plight.

#### **3.10.2 Respect for Persons**

This principle of respect refers to the researcher's acknowledgement that the participant is an autonomous individual who is capable of self-determination and individual choice. Respect for persons also includes the protection of those individuals with diminished autonomy such as the widows, orphans and persons with handicap (Brink et al., 2010; Burns & Grove, 2009; NNHREC, 2007).

In this study, all subjects were treated as autonomous agents as they were informed that their participation in the study was voluntary and that they have the right to withdraw from the study at any time without penalty.

#### ❖ **Right to Full Disclosure**

Full disclosure means that the researcher fully informs the participant of: 1).The purpose of the study; 2). The person's right to voluntarily choose to participate in the study or not; 3). The responsibilities of the researcher towards the participant and the research study; 4). The potential risks and benefits that could possibly result from participation in the study and 5). The person's right to withhold information or withdraw from the study at any given time without any consequence (Brink et al., 2010b; Burns & Grove, 2009; NNHREC, 2007).

In this research project, the right to full disclosure was respected by ensuring that each questionnaire was accompanied by a cover letter, so that each participant was fully informed about every aspect of the research project.

#### ❖ **Right to Privacy**

Privacy is the freely chosen ability of the participant to decide when, how and under which circumstances personal information may be shared with others. Thus, when a participant agrees to partake in a research study it is the researcher's responsibility to ensure that all data collected throughout the study will be kept confidential through the processes of anonymity and confidentiality. Anonymity is ensured by keeping the identities of the participants secret while confidentiality is assured by keeping all data that was gathered during the study safe, and guarding against any information being divulged or shared with any other person (Brink et al., 2010; Burns & Grove, 2009; NNHREC, 2007; Polit & Beck, 2013).

In this study, anonymity and confidentiality were ensured by making certain that the names and contact details of participants and the health facility where the research was conducted were known only to the researcher, the supervisor and statistician. A unique code number was assigned to each participant's questionnaire and the nursing unit, as well as the transcribed interview so that there were no traces to the participant personally or to the nursing unit through the completed survey. All information collected was kept in a locked filing cabinet at the office of the researcher, and all computers and backup media on which data was stored, were password protected. Master lists containing individual participant names, contact information and numerical identifiers were stored separately from the surveys. All raw data collected shall remain the property of UWC, and paper versions of the completed survey will be destroyed by shredding five years after the conclusion of the project. In addition, electronic data will be deleted upon completion of the project.

### **3.10.3 Informed Consent**

Informed consent means the prospective participant agrees to participate in the research study after receiving the necessary information, with the person having an adequate understanding of the research that is to be conducted, a free choice to take part in the study and being capable to make such a decision. If the participant complies with all these elements, a written consent form is signed by the participant. Informed written consent must also be sought from the research site and the relevant authorities where the research will be conducted. (Brink et al., 2010: 210; Burns & Grove, 2009: 204; NNHREC, 2007)

In this study, ethics clearance was issued by UWC Higher Degrees Ethic Committee before commencement of the study. Another certificate was obtained from the hospitals' research review committee while permission was granted by the unit managers. Participants were

provided with a cover letter about the research study, and each participant had the choice to complete the questionnaire at their own pace and in their own time. Completion and return of the questionnaires also imply consent (Polit & Beck, 2013:211). The mothers of preterm infants were approached personally on a one-on-one basis by the researcher before handing out the information sheets and consent form.

### **3.11 SUMMARY**

In this chapter, the research design was described in accordance with the aim and objectives of the study, and the research methods were described in relation to the phases of the study (Phase 1&2). Both phases were discussed with regard to the research instrument, population, the sampling method, data collection and data analysis of the study. The rigour of the study was explained and the chapter concluded with a portrayal of the ethical considerations of the study. The next chapter looks at the results of the findings of the study.

## **CHAPTER FOUR**

### **QUANTATIVE RESULTS AND DISCUSSION**

#### **4.1 CHAPTER OVERVIEW**

This chapter, interprets and discusses the empirical data in phase one by focusing on the quantitative aspect. It begins with data analysis according to the objectives and problems identified in each strand. The second section discusses the findings in relation to other related studies in literature and concludes with a summary.

#### **4.2 RESULTS OF THE QUANTITATIVE DATA**

The first two objectives of this research was to gather data on KMC practice in Edo State from the perspectives of the OHWs with regard to their knowledge, attitude and practice, as well as the challenges faced in KMC implementation; their recommendations to mediate the challenges were also sought. The results are discussed in accordance with the two populations that were used in the study.

##### **4.2.1 POPULATION ONE**

This population comprised of all the OHWs in the neonatal intensive care and the public health units. The nurses in the NICU are saddled with the provision of nursing care to the preterm babies, they render emotional support, give information about the KMC as well encourage and assist mothers with KMC practice. The public health nurses on the other hand, give education and information to clients on other diverse health issues including KMC practice. They also do follow-up visits of clients after discharge from the health facility. A total of 57 questionnaires were distributed of which 55 (96.5%) were duly completed and returned. This indicates a high

response rate which is one of the advantages of the questionnaire form of data collection (Burns & Grove, 2009). The high response rate as well as the use of an all-inclusive sampling criteria for the population group is a measure of the validity of the findings of this study as all reliable representatives of the population category were included.

The data are presented by descriptive statistics in the form of frequencies (f), percentages (%), means (M) and standard deviations (SD). In scoring for knowledge each correct option chosen was given a score of one (1) point and an incorrect option, a score of zero (0). This brought the total score for the knowledge section to a maximum of 7. The score was further converted to percentages with less than 50% graded as poor, 50-69.9% graded as fair and  $\geq 70\%$  as good. Scoring for attitude was measured by using the Likert scale. The highest score of 5 was allocated to strongly agree, while other options took 4, 3, 2, and 1 respectively. This brought the total score for attitude section to a maximum of 45 points and a minimum of 7. The score was then converted to percentages and graded as  $< 50\%$  as a negative attitude and  $\geq 50\%$  as a positive attitude.

Similarly, when scoring for participation and supervision of mothers of preterm infants who practice KMC, each correct option chosen was given a score of 1 point and an incorrect option of “no” or “I do not know” attracted a score of 0. This brought the total score for participation and supervision of mothers of preterm infants who practice KMC to a maximum of 5. The practice score was then converted to percentages and graded; less than 50% is poor and  $\geq 50\%$  is good. In the case of single responses to items, the researcher rounded off the percentages to the second decimal space, and thus percentages may not total to precisely 100%.

Since this study aims to develop a strategy for early implementation guidelines of KMC in healthcare facilities in Edo State, Nigeria, the researcher only highlights the negative aspects related to the factors affecting early KMC implementation guidelines in Edo State, Nigeria. However, it should be noted that KMC practice, though not fully embraced in healthcare facilities in Edo State, is not new in Nigeria because there are a few dedicated healthcare facilities for KMC in the northern part of the country and some tertiary health institutions of which the study site, UBTH is one. These institutions serve as referral centres to the secondary, primary and private hospitals as discussed in chapter 2 (refer paragraph 2.4.1.1).

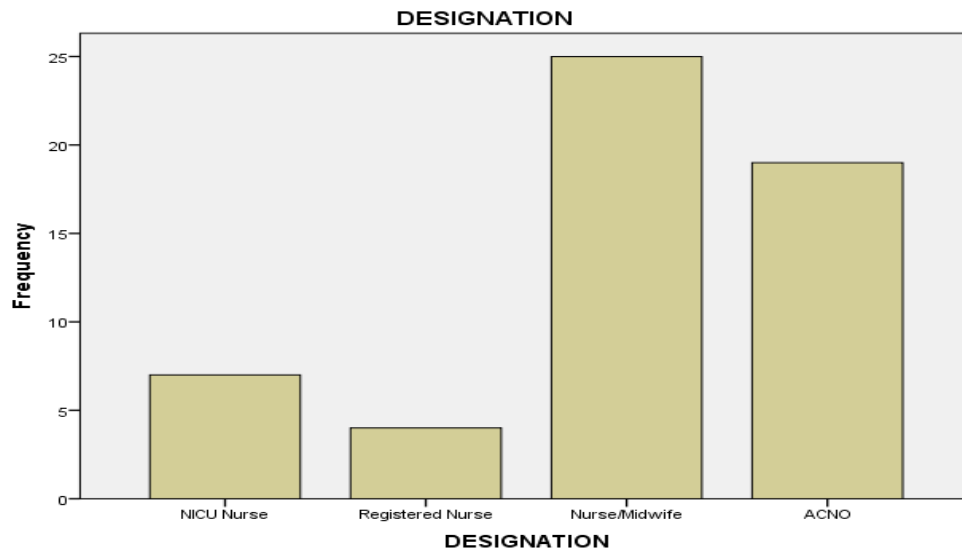
#### 4.2.1.1 BIOGRAPHIC DATA

**Table 4.2.1.1 Socio-demographic details of the respondents (n=55)**

Variable	Range	Frequency (%)	Mean (S.D)
Gender	Female	55 (100)	
	Male	0 (0.00)	
Age (years)	20-30 years	9 (16.4)	
	31-40 years	21 (38.2)	
	41-50 years	16 (29.1)	40.69 (8.9)
	51-60 years	9 (16.4)	
Designation	NICN	7 (12.7)	
	RN/RM	25 (45.5)	
	ACNO	19 (34.5)	
	R/N	4 (7.3)	
Work Experience (years)	0-4 years	2(3.6)	
	5-9	20 (36.4)	14.13 (9.211)
	10-14	9 (16.4)	
	15-19	6 (10.9)	
	20-24	8 (14.5)	
	25-29	7 (12.7)	
	30 years & above	3 (5.5)	

Table 4.2.1.1 shows the biographic data of the OHWs. All were females 55 (100%). The age range of respondents is between 20-60 years; those in the age bracket of 31-40 are more

21(38%), while the least are those aged 20-30 years and 51-60 years constitute 9 (16.4%) respectively. The mean age of the respondents is 40.7 years with a standard deviation of 8.9.



**Figure 4.2.1.2 Designation of respondents**

Figure 4.2.1.2 above represents the designation of the respondents. The double qualified nurses trained either as public health or paediatric nurse (RN/RM; Public. Health, Paediatrics) are clustered together and referred to as Nurse/Midwife. This group constitute the highest number 25 (45.5%). This is followed by the Assistant Chief Nursing Officers (ACNO) 19 (34.5 %.), while the registered nurses (those with only general nursing and midwifery certificates) constitute the lowest number of 4 (7.3%). However, only 7(12.7%) are trained in neonatal intensive care nursing.





**Figure 4.2.1.3 Work Experience of respondents**

Figure 4.2.1.3 represents the work experience of the respondents. Those who have work experience of between 5-9 years are more, 20 (36.4%); this is followed by those with experience of between 10-14yrs 9 (16.4%). The least are those with experience of less than 4 years 2 (3.6%). The mean experience is 14 years with a standard deviation of 9.212.

**PROBLEMS IDENTIFIED:**

- ❖ There are few nurses trained in NIC trained nurses in the facility.
- ❖ The employees who have work experience of 5-9 years constitute the majority 20 (36%) of the work force.

#### 4.2.2 KNOWLEDGE OF KMC BY OHW

**Table 4.2.2 Respondents knowledge of KMC (n=55)**

Variables	n (Freq.)	Percentage (%)
KMC is a method of caring for stable LBW /preterm infants below 2000grams	Yes	51 (92.73)
	No	3 (5.45)
	Don't know	1 (1.8)
KMC involves skin-to-skin contact between the mother and the LBW /preterm baby	Yes	53 (96.4)
	No	2 (3.6)
	Don't know	0 (0.0)
In KMC method the baby is placed in a kangaroo position on mother's chest	Yes	53 (96.4)
	No	1(1.8)
	Don't know	1(1.8)
The baby can be breastfed while on KMC method	Yes	34 (61.82)
	No	11(20.00)
	Don't know	10 (18.2)
The preterm infant on KMC method can be discharged early	Yes	44 (80.00)
	No	10 (18.18)
	Don't know	1(1.8)
Infant on KMC method can be discharged if the infant is stable. Gaining weight 15-20gm/kg/day	Yes	45 (81.82)
	No	5 (9.09)
	Don't know	5 (9.01)
The mother practicing KMC needs support in the hospital and at home	Yes	53 (96.4)
	No	2 (3.6)
	Don't know	0 (0.0)

Analysis of table 4.2.2 shows that the majority 51 (92.73%) of the respondents understand KMC as a method of caring for stable LBW/preterm infants below 2000grams. Fifty-three (96.4%) regard KMC as skin-to-skin contact between the mother and the LBW/preterm baby as well as a method in which a baby is placed in a kangaroo position on a mother's chest. Similarly, 34 (61.82%) of the respondents stated that the baby can be breastfed while on the KMC method but 10 (18.2%) was unaware of this fact. Following on this, 45 (81.8%) stated that the preterm infant on the KMC method can be discharged early and 53 (96.4%) stated that mothers practicing KMC need support in the hospital and at home.

#### PROBLEM IDENTIFIED:

- ❖ A significant number of participants lacked knowledge on some aspects of KMC particularly breastfeeding and the early discharge component.

#### 4.2.3 ATTITUDE TOWARDS KMC

**Table 4.2.3 Attitude towards KMC (n-55)**

Variable	Agree	Neutral	Disagree	Mean & SD
KMC has a positive effect on physical well-being of the infant	55(100.0)	0(0.0)	0 (0.0)	4.8 (0.40)
Infants on KMC have a low risk of hypothermia and infection	51(92.7)	4(7.3)	0(0.0)	4.47(0.69)
KMC results in more effective breastfeeding	43(78.2)	7(12.7)	5(9.0)	4.09 (0.99)
KMC will reduce hospital stay and cost of healthcare	47(85.5)	3 (5.5)	5 (9.0)	4.27(1.01)
KMC enhances the parents' confidence	53 (96.3)	1(1.8)	1(1.8)	4.56 (0.63)
KMC will promote mother-infant bonding	55 (100)	0 (0.0)	0 (0.0)	4.84 (0.37)
All parents should be encouraged to practice kangaroo care	44 (80.0)	1(1.8)	10 (18.2)	4.09 (1.16)
All parents should be given relevant information on kangaroo care.	47 (85.5)	1(1.8)	7(12.7)	4.35 (0.99)
Facilitating kangaroo care is an added burden to the health staff	26 (47.3)	1(1.8)	28 (50.9)	3.02 (1.35)

Table 4.2.3 shows that all 55 (100%) respondents agree that KMC has a positive effect on the physical well-being of the infant with a standard deviation of 0.48. Infants on KMC have a low risk of hypothermia and infection as attested to by 51(92.7%); 18(32.7%) agree, but 4 (7.3%) of them remained neutral. However, 43 (78.2%) agree that KMC results in more effective breastfeeding, 4 (7.2%) were neutral, while 5 (9.0%) disagree with a standard deviation of 0.99. On whether KMC will reduce hospital stay, 47(85.5%) of the respondents agree, 3(5.5%) were neutral, but 5(9.0%) disagree. Fifty three (96.3%) of the respondents agree that KMC increases

parents confidence; similarly, all respondents, 55(100%) agree that KMC will promote mother-infant bonding.

On the question as to whether all parents should be encouraged to practice KMC, 44 (80%) agree, while 10 (18.2%) disagree. A similar opinion was held by 47(85.5%) who disagree that all parents should be given information on KMC, but 7(12.7%) disagree at a standard deviation of 0.99. The table also shows that almost 50% (26) of the respondents view facilitating KMC as an added burden to the health staff, though 28 (50.9%) disagree while 1 (1.8%) remained neutral.

**PROBLEM IDENTIFIED:**

- ❖ Facilitating kangaroo care is regarded as an added burden by almost 50% of the health staff.

#### 4.2.4 PRACTICE OF KMC

**Table 4.2.4 Practice of KMC by Respondents (n=55)**

Variables	n (Freq.)	Percentage (%)
Encouraged mothers in the participation of KMC	Yes	50 (90.9)
	No	5 (9.1)
Assisted mothers in the participation of KMC	Yes	47 (85.5)
	No	8 (14.5)
Provided information about KMC to parents	Yes	50 (90.9)
	No	5 (9.1)
Participated in a training programme about KMC	Yes	21 (38.2)
	No	34 (61.8)
Being supervised in the technique of KMC	Yes	31 (56.36)
	No	24 (43.64)

Table 4.2.4 shows that the majority, 50 (90.9%) of the respondents has encouraged mothers to participate in KMC while 47 (85.5%) have assisted mothers to practice KMC. Fifty (90.9%) respondents had provided information about KMC to parents but 5 (9.1%) said they have not. Only 21 (38.2%) of the respondents have participated in a training programme about KMC; the remaining 34 (61.8%) did not. Similarly, 31 (56.4%) of the respondents have been supervised in the technique of KMC while 24 (43.6%) have not been supervised.

#### PROBLEMS IDENTIFIED:

- ❖ There is limited participation in training programmes about KMC
- ❖ There is limited supervision in KMC technique

#### 4.2.4.1 Chi-Square test of Knowledge and Practice

**Table 4.2.4.1 Chi-Square test of knowledge and Practice**

		Level of Practice			
		Low Practice (0-2)		High practice (3-5)	
		Frequency	Percentage	Frequency	Percentage
Level of Knowledge	Low (0-49)	0	0.0	3	6.5
	High (50-100)	9	100.0	43	93.5

$$\chi^2 = 0.621; p > 0.05$$

The  $\chi^2 = 0.621$  result on table 4.2.4.1 confirms the insignificant relationship between levels of knowledge and practice at a p value of  $>0.05$ . This shows that knowledge plays a limited role in KMC practice

#### 4.2.4.2 Chi-Square test of Practice and Attitude

**Table 4.2.4.2 Chi-Square test of Practice and Attitude**

		Level of Practice			
		Low Practice (0-2)		High practice (3-5)	
		Frequency	Percentage	Frequency	Percentage
Attitude Level	Negative (0-3)	3	33.3	12	26.1
	Positive (4-5)	6	66.7	34	73.9

$\chi^2 = 0.199$ ;  $p > 0.05$

Table 4.2.4.2 shows the Chi -Square analysis of practice and attitude. Result ( $\chi^2 = 0.199$ ) shows that there is no significant relationship between attitude and practice of KMC at p value of  $>0.05$ .

#### 4.2.5 CHALLENGES FACED IN THE PRACTICE OF KMC

**Table 4.2.5 Challenges in the Practice of KMC (n=55)**

Variables	Measurements	Freq. (%)
Lack of understanding of institutional policy on KMC	Yes	29 (52.7)
	No	26( 47.3)
No available KMC protocol and guidelines	Yes	30 (54.5)
	No	25 (45.5)
Lack of knowledge	Yes	1 (1.8)
	No	54 (98.2)
Lack of refresher programme on KMC	Yes	44 (80.0)
	No	11 (20.0)
Lack of KMC materials and facilities	Yes	44 (80.0)
	No	11 (20.0)
KMC is an added burden on the already heavy workload in the NICU	Yes	27 (49.1)
	No	28 (50.9)
Lack of support from medical personnel	Yes	25 (45.5)
	No	30 (54.5)
Lack of support from managers	Yes	26 (47.3)
	No	29 (52.7)
Parents unwillingness to sustain practice of KMC	Yes	41 (74.5)
	No	14 (25.5)
Safety issues for very low birth weight infants is a major constraint	Yes	32 (58.2)
	No	23 (41.8)

Table 4.2.5 captures the challenges faced by the OHW on the implementation of KMC. Twenty-nine (52.7%) of them stated that lack of understanding of institutional policy on KMC is a major challenge, but 26 (47.3%) stated otherwise. While 30 (54.5%) stated that there is no available protocol and guideline on KMC, 25 (45.5%) stated otherwise. Only 1 (1.8%) of the respondents claimed lack of knowledge of KMC; but 44 (80%) of them stated lack of refresher programmes and KMC materials as major challenges. Nearly half of the respondents 27 (49.1%) claim that KMC is an added burden on the already heavy workload in the NICU, while 28 (50.9%) opined otherwise.

Still on the table, lack of support from medical personnel and managers is implicated by 25 (45.5%) and 26 (47.3%) respectively as challenges, but 30 (54.5%) and 29 (52.7%) are not in agreement with this point. However, parents' unwillingness to sustain the practice of KMC was a major challenge to 41 (74.5%), while safety issues for very LBW infants was a concern to 32 (58.2%), although 23 (41.8%) did not regard this as a problem.

**PROBLEMS IDENTIFIED:**

- ❖ There is a lack of understanding of institutional policy on KMC.
- ❖ There is non- availability of KMC protocol and guidelines.
- ❖ There is a lack of refresher programmes on KMC.
- ❖ There is lack of KMC materials and facilities.
- ❖ KMC is regarded as an added burden on the already heavy workload in the NICU
- ❖ Parents are unwilling to sustain KMC practice.
- ❖ There is lack of support from medical personnel and managers
- ❖ There are safety issues for very low birth weight infants.

**4.2.6 SUGGESTIONS ON HOW TO MEDIATE CHALLENGES**

**Table 4.2.6 Suggestions on How to Mediate Challenges**

Variables	Freq. (%)
Provision of more health facilities that offer KMC services	25 (45.5)
Training and updating of health workers	22 (40.0)
Education of mothers of preterm infants on the importance of KMC	25 (45.0)
Employment of adequate health workers	25 (45.5)
Provision of KMC guidelines to reach every staff member	16 (29.1)

The major issues that appeared in the open-ended questions were organised into categories that fell into five major themes as represented and tabulated for ease of analysis in table 4.2.6. Analysis shows that 25 (45.5%) of the respondents suggested the provision of more health facilities in the state to offer KMC services. This is followed by training and updating of health



workers' knowledge by 22 (40.0%). Education of mothers of preterm infants on the importance of KMC was suggested by 25 (45%), while the employment of adequate health workers was also suggested by the same number. Sixteen (29.1%) of the respondents suggested the provision of KMC guidelines to be made available to every staff member.

#### 4.2.6.1 TEST OF RESEARCH HYPOTHESES

The following hypotheses were formulated to guide the study:

- ❖  $H_0$ : There is no significant relationship between knowledge and practice of KMC by OHW in healthcare facilities in Edo State, Nigeria.
- ❖  $H_1$ : There is a significant relationship between knowledge and practice of KMC by OHW in healthcare facilities in Edo State, Nigeria.

**Table 4.2.6.1 Correlation between knowledge and Practice**

	Practice	
	r	p
Knowledge	0.11	0.421

Table 4.2.6.1 shows the correlation between knowledge and practice of KMC by the OHW. There is a weak positive insignificant relationship ( $r=0.11$ ;  $p>0.05$ ) between knowledge of the OHW and the practice of KMC in healthcare facilities in Edo State, Nigeria. The null hypothesis ( $H_0$ ) as stated above was therefore accepted and the alternate rejected.

### 4.3 DISCUSSION OF FINDINGS OF THE QUANTITATIVE DATA

The purpose of this segment is to discuss the findings from the quantitative data from population one.

### **4.3.1 BIOGRAPHIC DATA OF RESPONDENTS**

The biographic data of the OHWs are discussed in relation to the healthcare facility, the gender, age and designation. The health facility is a level three Federal Government-funded hospital located in the state capital; this explains why all respondents work in the facility located in the urban area. This type of healthcare facilities are located in urban centres with large populations that have amenities such as stable electricity power supply, portable water, schools and many other social services. Furthermore, the availability of amenities serves as attraction for habitation for the elite compared to those districts which lack such amenities. This is in line with Bergh et al., (2012) who suggested that teaching hospitals could be made to serve as centres of excellence from where strategies to scale up KMC would flow. The site for this study is a recognised KMC centre that receives referral from other health facilities within and outside the state as aptly described in chapter three of this study.

The mean age of the respondents is 41 years with those aged between 31-40 years constituting the majority 21 (38.2%). The findings supports Agbedia, (2012) who reported low recruitment in the 1990s in Nigeria have produced a nursing workforce that is skewed toward older workers than the general workforce, but contradicts Siela, Twibell, and Keller (2008) who reported age of critical care nurses in USA to be between 50-59 years.

It is important to note that the Civil Service Policy in Nigeria pegs the age of retirement at 60 years. From this finding therefore, there is ample time of approximately 20 years to update the knowledge and skills of the respondents within the age group of 31-40 years while the older ones 9 (16.4%) in the age group of 51-60 years are gradually eased out of the work force.

All respondents are female; this finding indicate that the nursing profession is still predominantly female dominated, which is in line with the history of the profession. Males

have been found to constitute less than 10% of all nurses in Western countries like Norway (Solbrække, 2013). It is also important to remark here, that based on the researcher's personal experiences, male nurses do not find this sub-specialty of neonatal care attractive probably because it deals primarily with neonates and their mothers. The few male nurses in the profession prefer to be in the outpatient clinics, emergency rooms, psychiatry units or work as nurse educators in various schools. This view was however contradicted by a study in Britain which reports an inability to make sense of some aspects of working life as probable reason men choose to pursue jobs currently dominated by women (Bagilhole & Cross, 2006). But it validates the findings in a study from China that compared differences in gender-based levels of role strain and related attitudes among nursing students during their obstetrics training. Findings were that male nursing students face more gender-based role stress than do their female peers. The stereotyped viewpoint about the gender role and occupation were all significantly higher than those of their female counterparts, according to Tzeng, Chen, Tu, & Tsai (2009).

The designation of the respondents, show that nurse/midwife constitutes the highest cadre and only 7 (12.7%) are trained neonatal nurses. This is a significant finding and an indication that some of the respondents, apart from being registered nurses/midwives and public health nurses also have post basic certificate in NIC. This is good for nursing practice because qualified staff are always on the ground to handle the daily task of caring for neonates and their mothers; though they are few. It was previously mentioned that the respondents recruited for the study are nurses who are doubly qualified as SN/SM with an additional certificate in neonatal nursing, or public health (see section 3.7).

#### **4.3.2 KNOWLEDGE, ATTITUDE AND PRACTICE OF KMC BY OHW**

The first two objectives of this study were to describe the knowledge, attitude and practice of OHWs in Edo State, Nigeria regarding KMC guidelines. Based on the results of the study, 94.5% of respondents were found to possess high knowledge of KMC as they see it as a method of caring for stable low birth weight preterm infants below 2000 grams, skin-to-skin contact between the mother and the low birth weight preterm baby. According to Bergh, et al (2012), this finding corroborates with a review of education and training practices in the implementation of KMC across the world that health workers active in the neonatal and maternity environment were found to play key roles in terms of facilitation of KMC, as well as providing a comfortable environment and privacy to the parents. The remaining 5.5% respondents in this study were found to have gaps in knowledge on some aspects of KMC such as breastfeeding while in KMC position.

This finding is in line with El-Nagar, Lawend and Mohammed (2013) who found that nurses who worked in facilities that practiced KMC had gaps in their knowledge. The point to note here is that those who have knowledge about KMC far outnumbered the ones who lack exposure and training. This is good for nursing practice as the knowledge acquired may not be unconnected to the fact that KMC is now embedded in the curriculum for midwifery training. Secondly, the study site serves as an approved KMC centre (Aboda & Williams, 2012). It is therefore expected that the personnel in the unit should be abreast with current best practices on maternal and neonatal care.

On attitude of the OHW towards KMC, the study found that the majority of the respondents have a positive attitude as they strongly agreed that kangaroo mother care has a positive effect on the physical well-being of the infant, and could result in low risk of hypothermia and

infection. Similarly, all the administrators in this study demonstrated a good attitude to KMC. This correlates with a study in South Africa where hospital staff were said to have a positive attitude to KMC (Solomons & Rosant, 2012). The positive attitude shown by the respondents may be connected to their knowledge, since ignorance and attitude are inseparable. The fact that the administrators have a good attitude to KMC will make them cooperate maximally on issues pertaining to its uptake and improvement.

Findings regarding the practice of KMC by the respondents (OHWs) were encouraging as almost all the respondents, 50 (90%) have encouraged mothers to participate in KMC and provided them with information. Worthy of mention is the 14 (14.5%) who have not assisted mothers in the participation of kangaroo mother care. This may be connected to their perception as rightly pointed out from previous studies that those who perceive KMC to be beneficial to themselves and the infants were willing to put it into practice in their unit. KMC was concluded to be based on perception rather than scientific evidence (El-Nagar et al., 2013).

Studies have also reported that healthcare personnel do not allow continuous kangaroo positioning when indicated because they are unconvinced of the need to provide a continuous kangaroo position (Bergh et.al, 2012). This is based on their understanding that some infants who are kept in the kangaroo position for only a few hours a day still grow properly and that there are reports abound of research in high technology neonatal units in which an intermittent kangaroo position has been used successfully (Bergh et al., 2010). Therefore, they do not really have faith in KMC. The health workers in the NICU in this study were found to be passionate about their job and the KMC concept as they are all positively disposed to the practice. This report is in contrast to the position of a consensus group on KMC acceleration that met in Istanbul, Turkey in 2013. The group observed that many healthcare providers at all levels do

not know or do not believe in the benefits of KMC, and therefore lack the zeal for effective implementation (Engmann et al, 2013).

A key finding in this study is the Chi-Square analysis of practice and attitude ( $\chi^2 = 0.199$ ) which shows no significant relationship between attitude and practice of KMC at a p value of  $>0.05$ . The implication is that though gaps exist in nurses' knowledge of KMC, it did not result in the development of a negative attitude to the practice of KMC by them. This type of attitude makes for good practice and leads to openness that will enable internalisation of KMC information. This validates Bergh et al. (2012) who posited that KMC practice was based on perception rather than scientific evidence.

Furthermore, the study reported an insignificant relationship between knowledge and practice by the respondents. This implies that though the respondents have gaps in their knowledge on some aspects of KMC, as seen in the breastfeeding concept, they are still very disposed to KMC practice. Two things are at stake here; one is inadequate information brought about by inadequate and update information on current trends in neonatal care. This could result in lack of confidence and its attendant effect on the ego of the nurse. This finding supports the report of a study in Sweden which indicated that nurses who worked in facilities that practiced KMC had gaps in their knowledge, while those who perceive KMC to be beneficial to themselves and the infants were willing to practice it in their unit (Blomqvist, Frölund, Rubertsson, & Nyqvist, 2012).

#### **4.3.3 CHALLENGES FACED BY OHWs**

Findings from the study indicate that the OHWs are faced with multiple challenges which include lack of understanding of institutional policy on KMC, non-availability of KMC

protocol and guidelines and more importantly, overwork. Some respondents actually reported non-availability of KMC guidelines and protocol, as well as lack of refresher programmes. This finding is in line with a study in Indonesia that reported challenges related to human resource and staff issues. Infrastructure and budget are among the major handicaps encountered in KMC (Pratomo et al., 2012).

The issue of non-availability of KMC protocol as indicated by some respondents is a difficult point to accept because the facility has been accredited since 2005 as a KMC centre. Management staff attested to this in this study. It is impossible or unlikely to practice KMC without a written protocol/guideline. The issue here is that the document is not accessible to all. The fact that more than half of the participants replied that there is no institutional policy or guideline on KMC means either one of two things; ignorance of the KMC policy, or it is not easily available or accessible to the staff.

It is instructive to mention that the researcher was actually also unable to obtain a copy of this policy from hospital management or from the unit head. This makes the staff response plausible when they stated that no KMC institutional policy existed. The researcher concluded that the protocol is not displayed nor made available to staff and mothers. The unit head, when confronted with this fact, promised to do something about it.

The psychosocial aspect of KC was well-articulated in the guideline for KC administration that highlighted issues to effectively implement KMC. Institutions were urged to make sure detailed indications about staff roles and responsibilities relating to parent information and support are

listed and addressed (Davanzo et al., 2013b). The problem of ignorance of KC would have been addressed if the institution had kept faith with this principle.

Lack of refresher courses was another handicap that majority of the respondents claimed. Some of the challenges identified as responsible for none to low implementation were resistance from health professionals which have a lot to do with their perception of KMC. KMC is considered a sub-standard care because it is perceived as a “poor man’s alternative” for developing countries. The importance of in-service training and other professional development pursuits cannot be overemphasised. The respondents believe that KMC is an added burden to the already overworked staff. The staff complement needs to be improved so as make the workers in the unit maximise their efforts as rightly explained by the administrators who gave a response on the projected number of staff required in each unit to provide maximum service. The challenges experienced by staff in this study are in line with that done by Charpak and Ruiz- Pelaez (2006) in Columbia to ascertain the initiation of KMC between 1994 to 2004 in 44 countries that practiced it.

Furthermore KMC is considered to represent extra work for staff who perceive the implementation and monitoring of the kangaroo position, kangaroo nutrition, early discharge from hospital and strict follow-up until term as extra work, and it is therefore asserted that training and supporting mothers in breastfeeding a premature infant are demanding in terms of skill, time and effort.

Bearing the current workload and inadequate number of staff as mentioned by the respondents in mind, if KMC implementation must improve from its current state, the issue of inadequate



personnel needs to be vigorously addressed to enable nurses to initiate KMC without being prompted by the doctors.

#### **4.3.4 RECOMMENDATIONS BY OHWs**

Having explored the challenges faced by staff in the early implementation of KMC guidelines, it was imperative that they be asked to proffer solutions to solve the challenges they raised. The respondents recommended improved staff numbers and regular training and refresher courses. They also want the KMC protocol to be made available to all staff. Furthermore, they opined that having more KMC centres would decentralise and reduce the pressure on the facility.

The researcher posits that practicing KMC does place additional financial burden on management in terms of new employment. Sending the operational staff on ground for refresher training and improving on the current domestic facilities for mothers can go a long way to start KMC. In-house seminars can be organised by the unit to update knowledge. If all are in place, KMC is cheap and readily practiced in any context as it does not require any special equipment. These recommendations align with Chia et al. (2006), in Australia who emphasised the need for in-service education to provide neonatal nurses with up-to-date information on the efficacy and beneficial effects of KC for infant and parents, as well as appropriate skill acquisition and opportunity for supervised practice.

#### **4.4 CONCLUDING STATEMENTS REGARDING THE OHW**

The following concluding statements were derived from the results and discussions according to the objectives 1, 2 and 7 as outlined in the first chapter of the study.

#### **4.4.1 Concluding Statements Pertaining to Demography of the OHW**

- ❖ There is inadequate number of nurses trained in neonatal care based on the recommended nurse to patient ratio of 1:4 (Adomat, 2004).
- ❖ The employees who have work experience of 5-9 years constitute the majority 20 (36%) of the work force.

#### **4.4.2 Concluding Statements Pertaining to Knowledge of KMC by OHW**

- ❖ There is overall good knowledge by the OHW on some aspects of KMC, especially breastfeeding the infant while in the KC position.
- ❖ There is weak insignificant relationship between knowledge and practice of KMC.

#### **4.4.3 Concluding Statements Pertaining to Attitude of OHW to KMC**

- ❖ There is consensus that facilitating kangaroo care is an added burden to the health staff.
- ❖ There is a weak positive correlation between knowledge and attitude to KMC. This means that the OHW's attitude to KMC is not affected by the amount of knowledge they possess.

#### **4.4.4 Concluding Statements Pertaining to Practice**

- ❖ There is no participation in training programmes on KMC.
- ❖ There is no supervision on KMC technique.

#### **4.4.5 Concluding Statements Pertaining to Challenges Encountered by OHW**

- ❖ There is a lack of understanding of institutional policy on KMC.
- ❖ There is non-availability of KMC protocol and guidelines.

- ❖ There are no refresher programmes on KMC for staff.
- ❖ There is a lack of KMC materials and facilities.
- ❖ There is a consensus agreement 25 (49.1%) that facilitating KMC is an added burden on the already heavy workload in the NICU.
- ❖ Nurses in the NIC are reluctant to initiate and practice KMC.
- ❖ There is lack of sufficient funds to send staff for KMC training and workshops 44 (80.0%).
- ❖ There is lack of funds to provide physical infrastructure in the hospital for enhanced KMC practice 44 (80.0%).

#### **4.4.6 Concluding Statements Pertaining to Solutions Proffered by OHWs**

- ❖ Training and awareness creation, as well as making the KMC guideline available to all staff were recommended.
- ❖ Provision of more health facilities that offer KMC services 25 (45.5%).
- ❖ Employment of adequate health workers 25 (45.5%).

## **4.5 POPULATION 2: ADMINISTRATORS**

### **4.5.1 OVERVIEW**

This section analysed the questions that address objectives 3, 4 and 7 that was administered to the four administrators. They were all duly filled and returned indicating a 100% response rate.

#### 4.5.2 Biographic Data

**Table 4.5.2: Socio-demographic (n=4)**

Variable	n	f (%)	Mean (SD)
Gender	Male	1 (25.0)	
	Female	3 (75.0)	
Working experience	25-30yrs	3(75%)	27.75 (4.72)
	30yrs and above	1(25%)	
Designation	CMD (Deputy)	1 (25.0)	
	DNS	1 (25.0)	
	ADNS	2 (25%)	
Other Variables			
Status of facility	Tertiary	1	
Size	716 bed spaces		
Year KMC started		2005	
Existing KMC policy	Yes	4 (100)	
	No	0 (0)	
KMC model practiced	Facility-based	4(100)	
Staff strength in the units	ANC	10	0.00
	O&G	26.00	10.39
	Paediatrics	20.00	0.00
	NICU	40.00	9.82
	Public health	25.00	9.20
Additional manpower required for effective KMC implementation	ANC	11.33	1.15
	O&G	10.00	2.89
	Paediatrics	13.33	0.000
	NICU	10.00	0.00
	Public health	10.00	0.0

Table 4.5.2 shows that 3 (75%) of the respondents are females, the only male is the Chief Medical Director (the CMD). Their work experience ranges from 25-30 years and above with 3 (75%) of them having worked for 20-25yrs.

The average working experience of the respondents is 27.75 years. Three (75%) of the respondents are Deputy Directors of Nursing Services (DDNS), while the fourth one is the CMD of the hospital. Other variables relating to the demography of the health institution are: it is a tertiary hospital with bed occupancy of 716 patients. It has an existing KMC policy which started in 2005 as attested to by the all respondents 4 (100%). A total of 121 nurses currently

provide services in the antenatal, obstetrics and gynaecology (O&G), paediatrics, public health and neonatal intensive care units; but there is an expressed need by the administrators for an additional fifty-four (54) personnel in the ANC=11, O&G=10, Paediatrics=13, NICU=10 and Public health unit =10. These units are directly responsible for maternal and child health in the facility that would facilitate uptake of KMC.

### 4.5.3 ATTITUDE OF ADMINISTRATORS TOWARDS KMC

**Table 4.5.3 Attitude of Administrators towards KMC (n=4)**

Variable	Agree	Neutral	Disagree	Mean & S.D
KMC has positive effect on physical well-being of the infant	4(100)	0(0.0)	0(0.0)	2.50(0.50)
Infants on KMC have a low risk of hypothermia and infection	4(100)	0(0.0)	0(0.0)	2.50(1.00)
KMC results in more effective breastfeeding	4(100)	0(0)	0(0.0)	1.75(0.50)
KMC will reduce hospital stay and cost of healthcare	0 (0.0)	4 (100)	0 (0.0)	2.50(1.00)
KMC enhances the parents' confidence	3 (75.0)	1(25.0)	0 (0.0)	1.75 (0.50)
KMC will promote mother infant bonding	2 (50.0)	1(25.0)	1 (25.0)	1.75 (0.50)
All parents should be encouraged to practice kangaroo care	3 (75.0)	1(25.0)	0 (0.0)	3.25(1.50)
All parents should be given relevant information on kangaroo care.	2 (50.0)	1(25.0)	1 25.0)	2.75(1.50)
Facilitating kangaroo care is an added burden to the health staff	4(100.0)	0 (0.0)	0 (0.0)	1.00(0.00)
KMC is a practice for preterm newborns in low-income countries only, & is a "next best" alternative to incubator care.	0 (0)	0 (0.0)	4 (100.0)	4.25(0.50)

In table 4.5.3, all the respondents, 4 (100%) agreed that KMC has a positive effect on the physical well-being of the infants, as well as its resultant effect in low risk of hypothermia and infection. They all (100%) agreed that KMC results in more effective breastfeeding but remained neutral on whether KMC will reduce hospital stay and the cost of healthcare. However, 3 (75%) of the respondents agree that KMC enhances the parents' confidence and

that all parents should be encouraged to practice kangaroo care; but 1 (25.0%) of them remained neutral on this with a standard deviation of 1.50. The table also shows that 2 (50.0%) respondents agree that all parents should be given relevant information on kangaroo care, while the remaining two respondents were either neutral or disagree. Another feature on the table is that fact that all respondents, 4 (100%) agree that facilitating KMC presents an added burden to the health staff and disagree that KMC is a practice for preterm newborns in low-income countries only, and is a “second best” alternative to incubator care.

#### PROBLEMS IDENTIFIED:

- ❖ There is no consensus on some aspects of KMC advantages by all 4 respondents  
1(25.0%)
- ❖ Respondents are neutral on the ability of KMC practice to reduce hospital stay of the infants
- ❖ Only 2 (50%) of the respondents agree that parents should be given relevant information on KMC
- ❖ Facilitating KMC is regarded as an extra burden on the staff.

#### 4.5.4 CHALLENGES IN KMC IMPLEMENTATION BY THE ADMINISTRATORS

**Table 4.5.4 Challenges in KMC implementation (N=4)**

Variables	Measurements	Freq. (%)
Safety issue for very low birth weight infants is a major constraint	Yes	2(50.0)
	No	2(50.0)
There are inconsistencies in the practice of KMC	Yes	2(50.0)
	No	2(50.0)
Medical doctors and nurses feel KMC is an extra workload	Yes	2(50.0)
	No	2(50.0)
NICU nurses are reluctant to initiate and practice KMC	Yes	4(100)
	No	0(0.0)
Medical staff are reluctant to initiate and practice KMC	Yes	0(0.0)
	No	4(100)
Lack of experience with KMC	Yes	0(0.0)
	No	4(100)
Belief by parents and staff that technology is better than KMC	Yes	2(50.0)
	No	2(50.0)
Clients' unwillingness to initiate KMC due to cultural misconceptions	Yes	1(25.0)
	No	3(75.0)
Lack of sufficient funds to send staff for KMC training & workshop	Yes	4(100)
	No	0(0.0)
Lack of space in NICU to implement KMC	Yes	4(100)
	No	0(0)
Lack of funds to provide all the sundry facilities needed for KC	Yes	4(100)
	No	0(0.0)
Lack of funds to provide physical infrastructure	Yes	4(100)
	No	0(0.0)
There is no institutional policy for KMC; It is not well-articulated nor within my powers to initiate one right now in the hospital agenda	Yes	0(0.0)
	No	4(100)

Table 4.5.4 highlights the challenges experienced by administrators. Safety issues for very LBW infants are major challenges faced by 2 (50%) of the respondents while 2 (50%) opined that there are inconsistencies in the practice of KMC. However, all respondents 4 (100%) opined that NIC nurses are reluctant to initiate KMC while the medical team is well-disposed to it. Belief by parents and staff that technology is better than KMC is a challenge faced by 2 (50%). Lack of sufficient funds to send staff for KMC training and workshops, lack of space in NICU to implement KMC and lack of funds to provide all the sundry facilities needed for

KMC are challenges encountered by all 4 (100%) respondents. All respondents, 4 (100%) disagree that there is no institutional KMC policy.

**PROBLEMS IDENTIFIED:**

- ❖ Safety issues for very LBW infants is a major constraint
- ❖ There is a reluctance by NICU nurses to initiate and practice KMC.
- ❖ There is a lack of space in NICU to implement KMC.
- ❖ There is a lack of sufficient funds to send staff for KMC training and workshops
- ❖ There is a lack of funds to provide physical infrastructure

**4.5.5 SUGGESTIONS BY ADMINISTRATORS TO OVERCOME KMC CHALLENGES**

**Table 4.5.5 Suggestions by Administrators to Overcome the Challenges**

No.	Variables	Freq. (%)
1.	More training and awareness about KMC and its importance	4(100)
2.	Increased funding	2(50.0)
3.	Encouragement of mothers of preterm on the importance of KMC	2(50.0)
4.	Provision of KMC guidelines to reach every staff member	4 (100)
5.	Employing more KMC staff	2(50.0)
6.	Equipping the mothers’ room in the facility	2(50.0)

Table 4.5.5 above depicts suggestions made in the open-ended questions to the respondents on how to overcome the challenges they face in the implementation of KMC practice. These were grouped into emerging themes and tabulated into a frequency table. All respondents, 4 (100%) are of the opinion that training, and creating awareness will help overcome the challenges of implementing KMC. Two (50%) of them suggested increased funding and encouragement of mothers on the importance of KMC respectively. All respondents suggested that KMC



guidelines be made available to all staff as, well as employment of more staff to overcome staff shortage. Finally 2 (50%) respondents suggested equipping the mothers' room.

#### PROBLEMS IDENTIFIED:

- ❖ There should be more training and awareness creation on KMC concept.
- ❖ Increased funding suggested.
- ❖ The provision of KMC guideline to be accessible all staff.
- ❖ Employment of new staff.
- ❖ Equipping the mothers' room in the facility.

## **4.6 DISCUSSION OF POPULATION 2 RESULTS: ADMINISTRATORS**

### **4.6.1 BIOGRAPHIC DATA OF RESPONDENTS**

Among the four respondents in this group, three of them are females while the only male is the Chief Medical Director of the hospital. As stated earlier, this fact is not uncommon in the nursing profession. Three of them have working experience of between 25-30years while one have work experience of 30 years and above. The increase in the year of service is expected of persons in the administrative cadre. On designation, one is the Chief Medical Director, another, Deputy Director of Nursing Service while the remaining two are Deputy Directors of Nursing in charge of the NICU and the public health unit respectively. The facility commenced KMC in 2005 as attested to by the respondents though an official written document was not immediately available to confirm this.

### **4.6.2 ATTITUDE OF ADMINISTRATORS TO KMC PRACTICE**

As observed with OHWs, the administrators have a positive attitude to KMC. A good attitude and emphatic understanding are some of the ingredients that encourage subordinates in the

performance of their tasks. However, the respondents were all neutral as to whether KMC actually reduces hospital stay. The researcher is of the view that they remained non-committal because studies have reported administrators being uncomfortable with the early discharge component of KMC (Blomqvist et al., 2013).

#### **4.6.3 CHALLENGES EXPERIENCED BY ADMINISTRATORS**

As reported in the OHW survey, the administrators also demonstrate a positive attitude but are deterred by lack of funds and the poor attitude of the nurses who see KMC as an added burden to the existing heavy workload in the NICU. This was supported by Seidman et al. (2015) who posited that positive attitude notwithstanding, hospital administrators are hindered in the effective implementation of KC by lack of modern infrastructure and budget. A similar view was expressed in an Indonesian study that identified challenges related to human resource and staff issues. Additional infrastructure and budget were among the major handicaps encountered (Pratomo et al., 2012).

It is the researcher's opinion that the above challenges need little or no cash to mediate, but goodwill, understanding and encouragement on the part of administrators. Once they are in tune with the way the operational workers feel about their work environment, they would be able to take the necessary steps to solve these irritations. Emphatic understanding by superiors of their sub-ordinates' plight goes a long way to create a conducive and happy work environment irrespective of the heavy workload.

The unit manager and the senior registrar, during an unofficial interaction prior to an interview session with a mother, remarked that KMC does not require additional room for practice by the mothers. Commitment is needed on the part of the staff of the NIU and constant monitoring of

the parents to prevent the “African factor”. The African factor they explained is the belief in African traditional medicine. Some parents do not have faith in modern medicine alone; they still have the tendency to secretly combine conventional treatment with traditional medicine. She reported incidences of loss of life of preterm infants in the past after some concoctions have been administered by mothers either orally or as lubricants. These incidences informed the management’s lack of enthusiasm in creating a KMC practice room. The room referred to by the researcher and mothers as a KMC room in this study is located at the extreme end of the unit; this gives the mothers opportunity to carry out unhealthy practices on the infant away from the prying eyes of the health workers.

As it stands presently, there is no KMC dedicated room in the facility. The room referred to in this study is now reserved as lecture room for medical students. This is in line with findings in Malawi and Uganda where both countries KMC services were available in only one or two hospitals for a fairly long period of time prior to concerted efforts being made to scale up intervention. Factors identified in implementation are: training and orientation; supportive supervision; integrating kangaroo mother care into quality improvement; continuity of care; high-level buy in and support for kangaroo mother care implementation; and client-oriented care (Bergh, Kerber, Abwao, Johnson, Aliganyira, & Davy et al., 2014).

#### **4.6.4 RECOMMENDATIONS**

Improved facilities, increased funding, as well as the availability of the KMC protocol and workshops to all staff were promised or suggested by the administrators. This is very important as the respondents reported lack of awareness of an existing KMC protocol.

## **4.7 CONCLUDING STATEMENTS ON CHALLENGES EXPERIENCED BY ADMINISTRATORS**

### **4.7.1 Concluding Statements Pertaining to Demography of Administrators**

- ❖ Only one male among the four administrators.
- ❖ Expressed need for additional staff for KMC facilitation.

### **4.7.2 Concluding Statements Pertaining to Attitude of Administrators towards KMC**

- ❖ There is no agreement on all aspects of the KMC advantages by the respondents  
1(25.0%)
- ❖ Facilitating KMC is regarded as an extra burden on the staff.

### **4.7.3 Concluding Statements Pertaining to Challenges Experienced by Administrators**

- ❖ There is a reluctance by NIC nurses to initiate and practice KMC.
- ❖ There is a lack of space in NICU to implement KMC.
- ❖ There is a lack of sufficient fund to send staff for KMC training & workshops.
- ❖ There is a lack of funds to provide physical infrastructure.

### **4.7.4 Concluding Statements Pertaining to Administrators' Recommendations**

- ❖ More training and awareness on KMC concept recommended.
- ❖ Increased funding from government suggested.
- ❖ Increased effort for provision of KMC guideline to reach of all staff members.
- ❖ Improvement in staff complement is recommended.
- ❖ Equipping the mothers' room in the facility is recommended.

#### **4.8 SUMMARY**

In this chapter, the perspectives of the OHWs and administrators were reported and discussed with regard to their knowledge, attitude and practice, as well as the challenges they encounter and suggestions to mediate the administration of KMC. Gaps were reported on some aspects of KMC among the OHWs, while the administrators did not reach consensus on all aspects of KMC. The findings were discussed in line with similar studies in literature. Hindrances to practice by OHWs were due to the unavailability of the KMC document, non-availability of training and workshops and lack of infrastructure which the administrators could not provide due to funding challenges. Finally, the theoretical framework was discussed as it aligns with the study.

## **CHAPTER FIVE**

### **RESULTS AND DISCUSSION OF THE QUALITATIVE STUDY**

This section describes in detail the results of the qualitative aspect of the study that explored objectives 5, 6 and 7 in phase one.

The section is divided into four main segments in line with the objective of the study. The first segment addresses how data was realised, the second describes the demography of the respondents, while the third segment presents the findings of the study in line with objectives as stated in chapter one. These are reported as problems identified though some appear as concerns or issues and not problems in the real sense. The fourth segment discusses the findings in relation to other studies and ends with a summary of concluding statements and how the theoretical framework aligns with the chapter.

#### **5.1 REALISATION OF DATA AND ANALYSIS**

This section gives a description of the data realisation process and how interpretations were made in the qualitative segment of phase 1.

##### **5.1.1 Description of data analysis process**

Qualitative research, as defined by Maree (2010) is an interpretative methodological approach used to create subjective knowledge from the researcher's point of view. Data analysis in qualitative study enables large quantum of data collected from individual interviews or group discussions to be reduced to a manageable size using an inductive method to create codes, categories and themes (Burns & Grove, 2009).

The process of data analysis in qualitative studies as applicable to this study began with the first data collected. The researcher started by transcribing the audio tapes; these were then read and re-read to get familiar with the interview and make sense of the data. The transcriptions were thereafter transferred to a computer programme for coding and for the generation of codes for each statement which was then reduced to themes followed by the final write-up. Reflective notes were taken on the whole process after each interview and the transcription was done on the same day or within 24 hours in order not to lose vital information. The process of data transcription and analysis was personally done by the researcher so that confidentiality of the process could be maintained (refer paragraph 3.7.2.9).

In qualitative research, analysis does not end at description. Essential features and interrelations among the findings have to be reported and this was done by means of memos and other non-verbal cues of the respondents to enable conceptualisation of an idea (Burns & Grove, 2009). Memos were used to record insight or ideas irrespective of how vague it appeared and were given titles and dates (Tesch, 1990).

### **5.1.2 Interpretation of data**

Data interpretation focused on the socio-cultural practices surrounding child care as it relates to KMC acceptability and the challenges experienced by mothers of LBW/preterm babies in the uptake of this practice in Edo State, Nigeria. Useful categories were identified that formed the main themes.

## 5.2 DESCRIPTION OF PARTICIPANTS

A total of 13 mothers of preterm infants admitted into the NICU of a tertiary hospital were interviewed. As previously indicated in chapter 3, this number was determined by data saturation and a specified inclusion criterion. Their demographic characteristics are described in the ensuing paragraph.

**Table 5.2 Demographic Variables of Respondents (N=13)**

Variable		n (%)	Mean & SD
Age	19-24 years	1 (7.7%)	27.5(1.25)
	25-29 years	8 (61.5)	
	30-34 years	3 (23.0)	
	35 years & above	1 (7.7%)	
Marital status	Married	13 (100%)	
	Single	0 (0.0%)	
Occupation	Housewife	4 (30.7%)	
	Artisan /Trader	3 (23.1%)	
	Civil servant	5 (38.5%)	
	Student	1 (1.7%)	
Source of Admission	In-Patient	7 (53.8%)	
	Referral		
	2 <sup>nd</sup> facilities	3 (23.1%)	
	PHC	3 (23.1%)	
Gestational age of baby	28-31wks	5 (38.5%)	31.5 (0.99)
	32-35wks	8 (61.5%)	
Birth Weight of baby	1-1.4kg	7 (53.8%)	1.35 (0.97)
	1.41-1.6kg	6 (46.2%)	
Parity	1+ <sup>0</sup>	9 (69.2)	
	2+ <sup>0</sup>	2 (15.4)	
	3+ <sup>0</sup>	2 (15.4)	

As shown in table 5.2, 1 (7.7%) respondent is in the age bracket of 19-24 years and 35 years and above respectively. Three (23%) are aged 30-34 years, while 8 (61.5%) are in the range of 25-29 years. It should be noted that all respondents are married; 4 (30.7%) are full-time



housewives, 3 (23.1%) are artisans or traders, 5 (28.5%) are civil servants and 1 (1.7%) is a university undergraduate.

On the respondents source of admission, 7 (53%) were in-patients but 6 (46.2%) were referred from other healthcare facilities in the state or its neighbours. The gestational age of the babies ranged from 28-31wks, 5 (38.5%), while 8 (61.5%) ranged between 32-35 weeks with a mean age of 31.5 weeks and a standard deviation of 0.99. The parity of the respondents was from Para 1+<sup>0</sup> to 3+<sup>0</sup> with the primipara constituting the highest category, 9 (69.2%).

#### PROBLEM IDENTIFIED:

- ❖ Nearly half (46.2%) of the admissions were referrals from other health facilities, including PHCs.

### **5.3 RESULTS OF THE QUALITATIVE DATA**

The main objective of this section of the study was to explore the effect of socio-cultural practices on KMC uptake, as well as the challenges encountered by mothers of preterm /LBW babies in Edo State, Nigeria. Four themes were generated which describe the cultural practices as it relates to the above objectives. Extracts from the participants were used to support the descriptions of these themes. The exact language and phrases that were used by the participants were maintained, but for additional clarity and the flow of lexes, some grammatical amendments were made. The letter “M” (Mother) is used to denote the respondent’s and their corresponding number in the interview. The approach to the data analysis is thematic. Table 5.4 provides a summary of the emerged themes with their sub-themes and categories.

### 5.3.1 KMC VIEWED AS A NORM AND RESENTMENT FROM CORE TRADITIONAL PEOPLE

**Table 5.3 Emerged Themes and Categories and the Corresponding Sub-objectives**

Objectives	Themes	Categories	Sub-Categories
1. To explore the effects of socio-cultural practices on KMC uptake by parents of preterm and LBW infants in Edo State, Nigeria.	1. Awareness creation regarding KMC	<ul style="list-style-type: none"> <li>❖ Professional awareness creation</li> <li>❖ Awareness creation by significant others</li> </ul>	<ul style="list-style-type: none"> <li>❖ Nurses and doctors as informants</li> <li>❖ other mothers of preterm infants</li> <li>❖ Spouse</li> <li>❖ Female relative</li> </ul>
	2. Culture and current practice	<ul style="list-style-type: none"> <li>❖ Cultural perceptions: normality</li> <li>❖ Cultural Perceptions: a peculiarity</li> </ul>	<p>KMC as a Norm</p> <ul style="list-style-type: none"> <li>❖ Cultural practice and taboos</li> <li>❖ Mother's show of love and affection</li> <li>❖ Spousal dictates: fathers as caregivers</li> </ul> <p>Resentment from core traditional people</p> <ul style="list-style-type: none"> <li>❖ Universal cultural values of child well-being</li> <li>❖ Open condemnation of a mother using baby carrier in the front similar to KC) practice by others</li> <li>❖ Disrespectful attitude of youths</li> </ul>
	3. Emotions and actions created by the KMC practice	<p>Negative emotions</p> <p>Positive emotions</p> <p>Encouragement and reassurance</p>	<p>Fatigue</p> <ul style="list-style-type: none"> <li>❖ Irritation</li> <li>❖ Frustration</li> <li>❖ Stress</li> <li>❖ Surprise and fear due to ignorance</li> </ul> <ul style="list-style-type: none"> <li>❖ Sense of relieve</li> <li>❖ Happiness</li> <li>❖ Concern for baby's safety</li> </ul> <p>Satisfaction</p> <ul style="list-style-type: none"> <li>❖ from nurses</li> <li>❖ from significant others</li> </ul>

2. To explore the challenges faced by parents of preterm babies in the uptake of KMC in Edo State, Nigeria.	4. Challenges experienced with practice	Deterrents to acceptance of KMC practice	<ol style="list-style-type: none"> <li>1. Gossip and ridicule from untrusting friends</li> <li>2. Discouragement from others</li> <li>3. Nurses attitude</li> <li>4. Lack of privacy</li> </ol>
		Shortage of resources	<ol style="list-style-type: none"> <li>1. Human resources</li> <li>2. Physical resources</li> <li>3. Financial resources</li> </ol>
		Impact of challenges	<ol style="list-style-type: none"> <li>1. Sense of despair</li> <li>2. Inadequate practice time</li> </ol>
	5. Solutions and recommendation		<ol style="list-style-type: none"> <li>1. Information and education <ul style="list-style-type: none"> <li>▪ Timely information to mothers in the ANC&amp; while on admission</li> <li>▪ Print and electronic media for awareness creation on KC</li> </ul> </li> <li>2. Increment of human resource</li> <li>3. Addition of infrastructure</li> </ol>

### 5.3.2 AWARENESS CREATION REGARDING KMC

In order to gain a bigger picture of the objectives, respondents' understanding of the KMC concept/approach was sought, as well as their sources of information. The awareness obtained by the participants was from two sources; firstly, professional awareness was created by the nurses and doctors at the facility and secondly, from significant others such as other mothers of preterm infants admitted in the facility, spouses and female relatives.

#### 5.3.2.1 Nurses and Doctors as Informants

The questions asked by the researcher was: I observed some mothers carrying their babies strapped to their chest including you. What do know about this practice? Who told you about it? The analysis indicates that clients were ignorant of the concept before their babies were

admitted in the health facility; they only became aware of the concept through interaction with the professionals i.e. the nurses and medical personnel who provided expert advice and awareness about KMC. Below is the response of the second respondent, a 28-year-old lady.

*“I was told in this hospital by the nurses because they said if I put my baby in the chest, it will make my baby gain weight and be close to me and will make me have feeling for her as a mother.” (2<sup>nd</sup> respondent M2)*

This lack of awareness prior to admission was again corroborated by respondent (M4) a 19-year-old unemployed mother who said:

*“When I was told and introduced to it by the nurses, I was surprised that they can put babies on the chest, I told them I will put the baby anywhere I like, I didn’t know one can put baby on the chest (Laughing).” (M4).*

### **5.3.1.2 Awareness Creation by Significant Others**

Besides professional sources of information, respondents reported awareness about KMC from significant others like mothers of preterm babies admitted in the NICU and had been introduced to KMC practice earlier, a spouse or female relative. As is customary in human relations, one cannot help but share experiences and information regarding health and healthful living. In most cases, human relations are created by common experiences, especially when people are confined in the same space for a significant period. A mother whose child was also in the unit gave information of what to expect to this respondent (M6), a 28-year-old unemployed woman. She described to her what the whole process entails as the baby of (M6) became stabilised. She captured it as follows:

*“Even before I was told by the nurses, somebody (one of the women in the bay with me she started last 2 weeks) was already telling me that I will soon start KMC. I now asked, what is KMC? She now said that I will wear “buba” and put the baby inside them, I will now use wrapper to tie the baby.” (M6).*

Similarly, respondent 11 captured her awareness source, her spouse, who brought her pictures he downloaded from the internet of the animal “kangaroo” to drive home the point when she informed him about the impending KMC practice as explained by the nurses:

*“I did not know about it before my baby was admitted here. They told me when I came here (nurses and doctors). It was even my husband that first told me about KMC that it will help me after the nurses told me to prepare for it. I told him I was going to browse about it on the internet and that he too should browse about it. So he taught me about KMC because he knew about it before me. He now asked me whether I know of an animal they call kangaroo. I told him yes that the animal carries the baby inside the body. It was when I opened it online I now saw the picture of the animal where the baby was inside the stomach. He was the one that told me how the animal look like and behave and said that is why they use the name of the animal to describe the care.”(M11).*

Additionally, female relatives also served as a source of getting information because of their close interactions in human relationships. Hence it is not surprising that these relationships equally played out to be a source of awareness creation. Respondent one, an unemployed housewife referred from a neighbouring state (Delta State), had the following to say:

*“My elder sister is a nurse and she told about the good things of KMC; like the baby growing well and my breast bringing milk out better. She used to encourage me and said she has read about it and it is even used abroad too.” (M1).*

It is clear from the above quotes that there was lack of awareness prior to admission to the facility. This ignorance was doused by information and awareness which were created by the professionals at the facility and other sources, including relatives.

#### PROBLEMS IDENTIFIED

- ❖ Ignorance of concept prior to admission in the unit.
- ❖ Possibility of receiving distorted information from sources other than professionals.

#### 5.4 CULTURE AND CURRENT PRACTICE

Culture refers to the way of life of a people and is guided by norms and tradition as to what is acceptable and what is unconventional or alien (Sutan & Berkat, 2014). While some participants view KMC as a normal cultural practice, others saw it as an abnormal dimension in child care practice and held a negative view in this regard.

##### ❖ **Cultural Perceptions of KMC as Normality**

The question that was asked that lead to the reported narratives was: What are the practices surrounding infant or child care in your area? Some of the practices or taboos that can affect KMC are early breastfeeding since infants are normally put on the breast after expression of colostrum on or about the second day after birth, early weaning (from 4 months), nurturing the infant on the bosom, arms or on the laps by the parents, and not on the back until when the baby is about three months of age when the pelvic girdle is strong enough to go round the mother’s back. Doing otherwise could result in pelvic dislocation. If the reverse is the case,

putting the baby on the breast immediately after birth or delayed weaning (till about 6months), practitioners may be seen as going against custom and tradition. The management or taboo regarding some of these at any stage by the individuals in a society with strong cultural myths and beliefs may result in severe adverse outcomes such as resentment and outright reproach or condemnation (Ibekwe & Ibekwe, 2010).

In this study, KMC as a concept was seen as nothing new because it is the normal traditional African culture to nurture the young baby and breastfeed while holding it very close to the mother's bosom. Hence respondent (M1) referred to the concept of child care practices regarding carrying the baby by its mother as:

***“That one, in our side, we used to put baby in the front if he is less than three months like this one. You know the baby's hips are not wide and cannot go across the mothers back. After that three months you can put baby in the back.” (M1).***

From this participant's point of view, the African tradition had been indirectly practicing KMC if not for weight gain but because of love and affection for the infant. Some participants opined that KMC is only given a name to make it look foreign because it has been practiced indirectly without giving it a trade name.

Respondent M13, a 31-year-old secondary school teacher replied to this question:

***“The way we do is that because the baby is not strong or premature, we normally cover with thick baby shawl or wrapper so that he will not catch cold. We do not bring the baby out of the house until about 3 months. As the baby grow or matures well, the mother can back him as from one month and also give breast milk till 2 years,”***

***“You can see auntie nurse, that we too have been indirectly doing this KMC thing in Nigeria and Africa too.” (M13)***

Most of the respondents did not see the practice of KC as a violation of any cultural norm since different types of clutching the infant to the bosom has been practiced from ancient times in the African culture. In that sense, they responded that they were unaware or ignorant of any cultural taboos surrounding KMC as a way of nurturing the young infant. Respondents M2 and M12 capture this issue as follows:

***“As for me, I did not grow up at home and so I don’t really know. I don’t know of any one; my mother did not tell me. I am he last born so I don’t know.” (M2).***

Respondent M12, a 28-year old secondary school teacher who had her baby in the health facility replied to this question as follows and views KMC as the closest bond between a mother and her child:

***“To me, putting your child close to your breast and feeling the heat from each other is one of the closest ways you can get to a person. A mother who carries the baby like that should be praised and not condemned at all.” (M12)***

This promotes and signifies love and affection for the infant and highlights the cultural value Africans attach to children.

This study reported KMC as one of the universal cultural values of child well-being as respondent M4 a 19-year-old primipara who had her baby as an in-patient referred explained:

***“Our tradition as far as I observe do not encourage parents to ill-treat or watch their child die. The child is normally nursed close to the mother’s chest all over the world.”***



Speaking further she (M4) said:

***“No, I don’t know any taboo. No culture forbids caring for a child on the mothers’ breast. I should even think the culture is supposed to advertise it (M4).***

**❖ Cultural Perceptions of KMC as a Peculiarity:**

Having agreed that there are no known cultural taboos to KMC practice, some respondents however regard the practice as unconventional because it is seen as not the approved societal method of “carrying” babies. In the Nigerian culture and Edo State in particular, babies are carried on the back of a woman and not in front. To add to this contrast, babies are carried on the back only once they have reached a certain age (at least 2 months) and not immediately after birth, which in this case, they are carried in the arms or laid on the woman’s thighs or stomach when in a resting position. Importantly, this is not done continuously but only when the baby is feeding, crying, playing or being encouraged to sleep.

Hence respondent M3, a 35-year-old primary school teacher said:

***“It has been okay!! I was surprised because I have not seen or heard of it before that a baby is tied to the mothers’ front. I only know about putting baby in the back. (Laughing). That has been the tradition of our people especially in Edo State where I come from.” and “I think they may not approve because it is not our way of carrying babies” (M3).***

These concerns create resentment from core traditionalists like the chiefs, elderly women in the society and mothers-in law, which is a key finding in this study. These people are perceived or regarded as the custodians of the culture and they try every possible means to uphold the values of the culture irrespective of their education and exposure to modern trends and technology. Respondent M2 captured some of these reactions when she aptly described her mother-in-law’s initial reaction to KMC practice:

*“I believe it was unfriendly because she frowned her face and said, “What kind of Oyinbo (White man’s culture) thing is this? Don’t they have injections again to give? Are the incubators not working? Shebi (have they not?) they have put him there since we came here over three weeks ago? I don’t want anything that will make my people think I am the one trying to spoil our culture by allowing you to put the baby in the front like Oyinbo (White men & women) people used to do and we watch them on Television Ooh!!. We are going against the tradition oh! This is not what brought me here.” (M2)*

Furthermore, KMC practice was perceived as a peculiar method by the elders and other people as can be seen by the open condemnation it received. This disapproval was recounted in a scenario painted by respondent M6, a 28-year-old school teacher when her friend used a baby carrier that places the baby in front of the mother’s chest: (a method that resembles Kangaroo Care).

*“I don’t really know, but they may not accept it since it is not the normal way of carrying baby. Even the other day when one of my friends used the baby carrier her sister sent to her from abroad to carry baby in the front to our church at Ikpoba Hill, some mothers were even laughing while others said “this new generation of mothers self ---look at how she is carrying the baby as if she is ashamed to back her in the normal (traditional) way to carry her new born baby to the church (M6).*

On the contrary, some people including elders may just fold their hands and watch even when not convinced about the concept because they do not want to be disrespected by the youth who may see them as standing in their way of progress. This view was expressed and supported by M7, a 25-year-old medical student who is married to a medical doctor:

*“They will object definitely because it not our normal way of carrying baby. But because of the way we value children, they may just keep quiet and watch because they will not want to be seen as the ones opposing the youth who may start to disrespect them.” (M7)*

The role of men and fatherhood (paternity) in culture cannot be overemphasised. Fathers are regarded as the head of the family whose consent must be sought before any decision concerning a child is taken. They are consulted by their wives to give consent, provide leadership and protect the family from any form of ridiculing tendencies from society. Hence, participants responded that their husband’s consent is paramount to KMC practice.

*“Who can hide something like this from her husband? The man in my culture is the head and must give permission before you take decision concerning the children. Like me now, when I wanted to register in a private clinic near our house, my husband said I should go to government hospital.” (M2)*

Another respondent, M4, a 19-year-old young mother supported this point when she said:

*“As long as my husband likes it, the elders may just leave us alone as the baby is going to answer our name-----” (M4)*

This quote below by respondent M2, captures the reaction of how the other respondents felt about cultural dictates and resentment from people regarding KC practice. They indicated that they are willing to go against tradition, and brace all odds and inconveniences because of the love of their babies.

*I begi! (Exclamation to mean, she does not care what people may say). Their attitude will not affect me because this is my first baby Ooh! I know our tradition is good and it has a role to pay in our lives; but this is my life and my baby’s life. We do not have to live in the olden day’s times any more. The nurses and doctors told me that it is good and I believe them, this*

*is the era of technology and science. Despite tradition or not, but I think individuals should be allowed to decide what they like. Since it is good, no one can stop me.” (M2).*

### **PROBLEM IDENTIFIED**

- ❖ Elements of KMC has been part of African culture but it is now given a new tag and concept that makes it look foreign.

## **5.5 EMOTIONS AND ACTIONS CREATED BY KMC PRACTICE**

Emotions are personal reactions to a given situation that are expressed either overtly or covertly. The question asked was: How have your experiences been with practicing Kangaroo care? Three sub-categories arose from this theme; these are termed negative emotions, positive emotions and encouragement and reassurance.

### **❖ Negative Emotions**

Negative emotions were demonstrated by the respondents who regarded KMC practice as responsible for making them fatigued, irritable, frustrated and stressed out. For instance, some respondents expressed their fear and fatigue at KC practice regarding the inconveniences they encountered. This point is buttressed by respondent M2 as follows:

*“At first, I was afraid that the baby was too small and will catch cold if left naked like that. Also, the period one has to stay in one place when doing KMC. Gradually, I became used to it and can even walk around small and talk to my co-mothers in my bay when we are doing KMC; but at times, I get tired and hungry.”*

Some of the participants directly reported these negative emotions while others expressed them with negative remarks about the processes and demands placed on them by KMC practice.

Respondent M1, said;

***“I am made to be here almost every 4 hours every day to express breast milk and then put baby inside my clothes and do KMC for another 2hours again; it makes me tired.” (M1)***

This point is attested to by another respondent, M2 who regards the process as creating some inconveniences:

***“It has not been interesting at all, it is really very difficult and it inconveniences me.” (M2);***

While another respondent (M4) said:

***‘Also, the period I have to stay in one place when doing KMC...’ (Appearing irritated).***

Another negative emotion displayed by the respondents was fear. Merriam-Webster (1995) defines fear as being apprehensive or afraid. It is a distressing emotion aroused by impending danger, evil, pain and so on. Fear was expressed by the participants in this study regarding the well-being of the preterm infant in terms of its survival or comfort when engaged in KMC.

***“At first, I was afraid that the baby was too small and will catch cold if left naked like that outside the incubator.” (M4)***

In the same vein, another respondent (M10), a 34-year-old secondary school teacher expressed her fear of KMC practice when she said:

***“I think it is because baby is not safe in the front; when you put baby in the front when you are cooking, things like hot water and other things can usually get to the baby, but if the baby is at the back it will not affect the baby.”(M10)***

#### **❖ Positive Emotions**

Positive emotions were expressed overall after the participants have started to experience changes in their baby’s condition. They experienced some sense of satisfaction, relief and happiness when they started to observe the gains made while using KMC practice. These were evidenced either in terms of weight gain, infant-mother attachment or bonding or less crying by the baby when in KC position, as explained by a 35-year-old school teacher:

***“The experiences had not been too bad because it helps me to feel my baby. Before I started, the baby was not gaining weight, now there is weight gain.” (M5)***

Another respondent M6 expressed it as follows:

***“It was good. During KC, the baby will raise up his head and look at my face and turn his head then he will now turn and look at my face again. I now say to myself maybe the baby is thinking “so this is my mother.”***

#### **❖ Encouragement and Reassurance**

Encouraging acts are those displayed by professionals and significant others to mediate the various emotional and physical challenges the participants were experiencing during KMC practice. These gestures are important as it makes the mother feel that the pains and inconveniences she is experiencing are well-understood by persons close to her or the caregivers.

These acts of encouragement take the form of satisfaction with the infant’s condition and the way they are been assisted by the nurses and their significant others.

Despite the difficulties encountered by the participants, some of them still appreciated the role the nurses played in KMC, as can be seen by the following statement as expressed by M4:

***“The nurses are good and ready to assist me to do KMC or answer my questions about the baby especially when I want to know the weight.” (M4)***

Similarly, respondent M9, a 28-year-old trader with three previous deliveries said;

***“When I do it the baby is ok and the baby is always gaining weight, the baby sleeps well and does not usually cry at night, encouragement is given to me by the nurses. They always tell me to try and do KC every day, so it gives me joy and makes me attached to the baby.”***

Significant others play a very crucial role in KMC practice and its sustainability.

**“My husband even prefers the chest. When my first daughter was 3 months my husband always put her in his chest and I will be doing something.”** (M5); said a 27-year-old hair stylist mother referred from a PHC.

*“He supports it very well. He didn’t understand what it meant at first. Because he travelled, he was not around when I started. So when he called I explained to him what the nurses tell me to do. All the time, he will ask if I have done it. If I say yes, he will say okay.”* (M6).

Corroborating this fact, another respondent said:

*“Yes my husband knows about it. He was even the one that brought the clothes for me (buba and wrapper). As for my friends too they will like it as long as it is for the interest of my baby and me.”* (M2)

## **PROBLEMS IDENTIFIED**

- ❖ KMC is fraught with negative emotions of fatigue, irritability, frustration, fear and despair.
- ❖ KMC is perceived as a peculiar and unacceptable method of child care by the elders.
- ❖ Resentment of KMC by core traditionalists who perceive it as deviation from the norm.
- ❖ Parents who practice KMC have the resolve and determination to disregard tradition and elders’ opinion which can lead to conflict.
- ❖ Males are regarded as family heads whose consent and dictates must be respected regarding child care practices.
- ❖ There is happiness despite all the negative tendencies accompanied by practice.

## **5.6 CHALLENGES EXPERIENCED WITH PRACTICE**

The second sub-objective of this segment of the study was to explore the challenges faced by parents of LBW/preterm babies in the uptake of KMC in Edo State, Nigeria. The question also addressed the solutions to mediate the identified challenges. The question asked in this segment was: What major challenges did you encounter during this KMC practice? One theme arose from this objective followed by three sub-categories tagged: deterrents to acceptance of KMC, shortage of resources and impact of challenges.

### **5.6.1 Deterrent to KMC Acceptance**

Merriam-Webster Dictionary defines deterrent as “serving to discourage, prevent, or inhibit” In this study, it is an obstacle created by a feeling of uncooperative stance from the caregivers or significant others such as ridiculing behaviour from untrusting friends.

#### **❖ Gossip and Ridicule from Friends**

The respondents reported being deterred from the practice of KMC by gossip and ridicule from disbelieving friends due to perceived misconceptions and lack of understanding.

*“Some of them can just talk and gossip about you to the other people.” (M7)*

#### **❖ Discouragement from others**

Friends and neighbours play an important role in interpersonal relationships and how KMC is practiced. In addition to being gossiped about, discouragement from others (especially friends and relatives) was another deterrent encountered by the respondents as expressed by respondent (M8):



***“When I tell people that this is KMC they just laugh and say wow that’s good... (Depicting sarcasm).”***

This type of laughter cannot be taken as an acceptance of the practice. One can attribute this to ridicule or mere acceptance to make the mother feel good as they do not want to openly oppose the practice. In addition, mothers perceived this behavior as a form of sarcasm that depicted lack of acceptance by those who behaved in that manner.

Furthermore, some respondents raised the issue of misconceptions about KMC practice by family and friends who may act as a spoke in the wheel in the continuation and practice of KMC, as expressed thus:

***“I do not really see them applauding or supporting this thing as they are going to read several meanings and make insinuations to it.”(M8)***

***“They may react negatively and will not like it. They may even think because we are Christians or we are educated, that is why we trying to condemn the way children had been raised in the past. Some of them can even read funny reason like trying to pamper the child or spoil him.” (M12); and***

***“When I am alone without the neighbors or friends who may ask too many questions, watching me, I will quietly do it.” (M4)***

#### **❖ Nurses’ Attitude**

Attitude is one’s disposition or reactions to things either positively or otherwise (Merriam-Webster, 1995). Nurses’ attitude is generally regarded as a key to whether or not people will accept or utilise health services and health information. In this study, the negative attitude of nurses to mothers of preterm/LBW infants played out as reported by the respondents who stated that they are deterred from KMC practice by these practitioners who ought to

encourage them. Therefore, their acceptance and discouragement are of importance in KC uptake. These attitudes were characterised by the unacceptable responses given by nurses to mothers when they needed assistance with KMC practice as reported by the following statement (M8):

***“If you need assistance in putting baby in the buba and tying the wrapper, the nurses will be delaying and saying they are not the ones for KMC in the shift.” (M5)***

Another respondent equally referred to this negative attitude of the nurses when she relayed her experiences on how she was affronted by a nurse for the simple reason that she forgot to come to the unit with her wrapper for KMC as instructed the previous day. The nurse addressed her in very bad language and she was hurt. This type of behavior displayed by the nurses that tend to make them think the clients have no voice or right once in their care is a major complaint from the public. Respondents feel they are not accorded due respect when they seek care from healthcare providers, including nurses.

***“Some of the nurses are too harsh. The other day, I forgot to come with my wrapper, she shouted that I should go back, all the people around were now looking at me. She started saying something like --- -----I am too young to be a mother in the first place---- stuff like that really. Is that her business?” (M6, a 19-year-old mother).***

Another deterrent that featured in this study, as reported by respondents, is limited opportunity to practice KMC optimally. It was reported that nurses were not allowing respondents to have maximum time with their infants as they delay and give excuses until respondents are left with very limited time for KC, as explained by respondent M10:

*“Though, some of them are so harsh sometime is only few of them that are very kind, very few of them before I started KMC, I actually learnt that it would last at least 4 hours but I had not completed 2 hours, if you go there by 10am, before they will attend to you it will be a few minutes to 11am, then once its 12pm they take the baby and say they want to put the baby in the incubator. So it’s only very few people that when you go there they will attend to you immediately, majority of them will keep you waiting, they will tell you wait.”(M10)*

#### ❖ Lack of Privacy

Lack of privacy is another deterrent to practice established by this study. Privacy in this context is when there is no intrusion into a person’s space or the mother’s body is not unduly exposed to others without her consent. Based on best practices worldwide, an equipped KMC room that will allow for absolute relaxation, both psychologically and physically, is advocated. The researcher discovered that the only KMC room in the NICU was also used for other purposes such as a lecture hall for medical students or as a hideout for domestic staff. This lack of privacy was captured in respondent M6 own words:

*“At times when you go there, the Doctor will come and say they have lecture with medical students now; they will not even let you know before that time. Or the cleaner or even the ward attendant will just come there to lie down or start discussing in the room even when we are doing KMC.” (M6).*

#### 5.6.2 Shortage of Resources

Shortage of resources was reported in three sub-categories; human, physical and financial as key deterrent to practice. It is important to have enough staff, physical structures and facilities as these contribute to the physical and psychological well-being of both client and staff. An environment that is unhealthy in terms of physical infrastructure impacts on both the nurse and

client. Similarly, a nurse who is overworked due to inadequate manpower is bound to be haughty and make mistakes that have far-reaching effects on herself and her clients.

#### ❖ **Human Resources**

Human resources in the form of nurses, doctors and other allied health workers that render service in the NICU is a key to the successful implementation of KMC. The following quotes from respondents indicate to inadequate human resources realised in the form of not having enough nurses to render KMC services:

*“This unit needs more nurses so that they can help me feed baby while I express breast milk, but they say it’s not possible. So I’m trying to do my best.” (M7)*

*“The main problem is lack of nurses; government should employ more nurses because the nurses here are not much. Only one nurse to look after more than 8 babies in a shift. It is even worse on afternoon and night duty.” (M12)*

#### ❖ **Physical Resources**

This was another deterrent as respondents reported overcrowding in the mothers’ room as well as lack of basic amenities like beds and mattresses, among other.

Respondent (M12) reported:

*“They should give us room for KMC so that we will just come and stay. At that place (supposed KC room) they use it for their study too and it causes distraction. It will be good if they should put chairs.”*

Respondent (13) opined:

*At Stella (Stella Obasanjo women and children hospital) they sent me here. Government should build more hospital that practice KMC.*

❖ *Financial Resources*

The socio-economic status of recipients of healthcare accounts for its desirability and it is directly related to its usability. If services are overpriced, the poor will not be able to pay; consequences such as loss of life is imminent. In this study, respondents advocated for the reduction in hospital bills because the charges are exorbitant hence many of them reported an inability to pay for service even after discharge from the unit. These are captured in the statements below:

*“But they should help me reduce the hospital bills. It’s too much (laughs). I heard that the babies that were nursed in the incubator pay N5, 000:00 per day. They should please reduce hospital bills many people do not come with money.” (M13)*

This was corroborated with some very heart-rending accounts from other respondents who said:

*“They do not accept babies first, they always demand for money before taking care of the baby and sometimes it lead to the death of the baby.” (M3); and*

*“Eh!! Yes, I will like that since yesterday, they discharged me it’s about financial problem that is holding me back. I don’t have money to pay; so what I want the government to do is that please they should reduce the price. It is too much for us to pay and now I don’t have the money. If you borrow money, how will you pay back? The doctors would not cooperate until you pay the last money. So government should please reduce the price of things because everybody is not equal” (M3).*

## 5.7 IMPACT OF CHALLENGES

The impact of challenges experienced by the participants featured in various forms included a sense of despair and inadequate time for practice.

❖ **Boredom:** Respondents suffered boredom as reported by (M4).

❖ **Inadequate information on when to commence KMC**

A participant report inadequate information regarding when to commence KMC by the mothers.

*“The nurses should be telling the mothers because some of the mothers are not aware and if they don’t tell us, we will not know that our babies are up to the time that we will start doing the KMC. If they don’t tell us, we will not know that the babies have reached kangaroo stage. They should inform the mothers on when to start, like if the baby is this weight or that weight, they should start” (M3).*

### PROBLEMS IDENTIFIED:

- ❖ Deterrents due to gossip and ridicule from untrusting friends,
- ❖ Discouragement and misconceptions from others
- ❖ Nurses’ poor attitude as a deterrent.
- ❖ Lack of privacy.
- ❖ Inadequate time for practice.
- ❖ Lack of human, physical, material and financial resources.
- ❖ Boredom and inadequate information on when to commence KMC.

## 5.8 SOLUTIONS AND RECOMMENDATIONS

After listening to participants’ points of view regarding the socio-cultural practices that impinge on KMC uptake, it was necessary to ask for their suggestions to ease the challenges identified. It is important that views and opinion of users or customers of services, including

healthcare are constantly sought as they are in the best position to identify areas that really need attention.

The researcher therefore asked: Any suggestions to improve KMC practice across the state?

The solutions below were proffered to mediate the challenges experienced by participants.

They suggested that information and education should be timely; the use of electronic and print medium was also suggested, as captured in this statement:

*They should teach it in the antenatal clinic and let it be one of the topics to prepare mothers of how things may turn out to be, because nobody wants to have a premature baby. It should also be taught in churches during women's programmes. They should be teaching it in schools in secondary schools or even family planning clinic. They should teach it in radio programmes and television interviews. So they should talk about it in television and radio programmes (M13, a 32 year old business woman).*

### **5.8.1 Information and Education**

#### **❖ Timely Information**

Information on KMC should best be given while the mother is attending ANC or immediately when the preterm term infant is admitted to the NICU to avoid distortion.

*“To me, it is to inform and educate people who do not know about it. Like me I have not heard about it in the television and radio before. Even self, they can still tell them in the ANC clinic.” (M8)*

#### **❖ Print and Electronic Media**

This medium is suggested by respondents to enable the prospective mother and the general public have awareness of the KMC concept to promote its acceptability.

*“They should use radio and television to discuss it so that people will know about it more.” (M8).*

Another respondent aptly made her suggestions as follows:

*“For me, everybody does not go to ANC; if they say they should wait for all this nurses to tell them to do it, some parents will not come. They should print flyers or handout to parents so that they can read it and understand it. Even radio they can put it in television or in radio so that people can be enlightened about it.” (M9)*

### **5.8.2 Increment of Human Resources**

Respondents also complained of shortage of manpower and recommended that more nurses should be employed. According to respondent M10:

*“They should have more nurses because you find out that it’s that nurse that attended to you will still be the one to feed that baby. So it is one nurse that will have three babies to attend to at a time. There should be plenty nurses so that one should be attending to a particular person, you would first of all attend to them and that is not only the work for them. They would be attending to us easier and faster and it is not that nurses will still be the one to feed the baby and all of that. That is why they don’t encourage or they take time to attend to us all when we need a hand to improve on it” (meaning KC)*

### **5.8.3 Additional infrastructure**

Respondents suggested having more KMC centres at hospitals across the state.

*“See now, the Doctor says many hospitals are already using it, but we don’t have it like that here in our State. We do not have many doctors in the other hospitals. They don’t even have this kind of SCBU in the general hospital and maternity.” (M12).*



## **SOLUTIONS IDENTIFIED**

- ❖ Timely information in electronic and print media recommended.
- ❖ Increment in human, material and infrastructural resources recommended.
- ❖ Increase in KMC dedicated facilities.

## **5.9 SUMMARY**

This chapter thematically analyzed the qualitative aspect that entailed a structured interview with 13 mothers of preterm/LBW babies. Findings indicates lack of knowledge of KMC prior to admission, however, no socio cultural barriers were reported except some misconception. Hindrances to practice were identified to include nurses' poor attitude which limits time for practice inadequate infrastructure. All respondents were unanimous in their resolve to practice KMC despite all odds.

## **5.10 DISCUSSION OF THE QUALITATIVE RESULTS**

The purpose of this segment is to summarise and discuss results from the qualitative data in line with the research objectives. Discussions were in accordance with the demography of respondents, the categories and themes that arose from the socio-cultural factors that impinge on KMC. The section is concluded with a summary of the chapter.

### **5.10.1 Biography of Respondents**

Thirteen mothers of preterm/LBW infants participated in the study. The age of the respondents ranged from 19 to 36 years. The point of interest here is that the participants are all adults of 18 years and above, according to the Federal Government of Nigeria Constitution of 1999 section 29(4) which stipulates that citizens must be 18 years of age to enter into any marriage contract

(FGN, 1999). At this age, an individual is no longer regarded as a minor but an adult who is capable of taking independent decisions, and also has voting rights. It is therefore unacceptable to refer to the young mother aged 19 years as unfit for motherhood, as was reported in this study.

There are two issues here, firstly, the interaction and communication method of the nurses with the mothers which was resented by some of them. The researcher views the nurse as unaware of the constitutional age requirement for marriage in Nigeria; or the nurse has assessed the mother based on her behaviours which she felt was not expected of her age and status as a mother. The age at marriage and children independence in Nigeria is 18 years (FGN, 1999). However, the age of the youngest participant was 19 years, meaning that she is of age to take responsibilities for her actions or inactions.

Another important feature in the demography of the participants is that nearly half of them were referrals from other health centres. This fact validates the researcher's preliminary findings that no other recognised health facility in the state practices KMC. This places pressure on the health facility in question in terms of physical, material and human resources required to meet the increased demand for services. This finding is in line with recommendations by Bergh et al., (2012) that teaching hospitals could serve as centres of excellence and be responsible for the education and training of personnel for KMC practice to enable a national outlook for KMC.

The report also indicates that 4 (30.8%) of the respondents are full-time housewives while the others are either artisans or civil servants. The researcher opines that the unemployment state of these mothers would place extra demands on their spouses. This may have been responsible for the appeal to reduce hospital bills by some of the respondents. This result is in line with

Kramer et al (2000) who stated that poverty and its related consequences such as inability to access health services due to lack of funds, are major causes of lack of utilisation of health services.

### **5.10.2 AWARENESS CREATION REGARDING KMC**

Studies have documented nurses' role in providing information to their clients, especially those who work in the maternity and neonatal areas in the implementation and care of preterm infants using KMC (Nyqvist, 2016; Chai et al., 2006). The NICU nurses provide nursing care as well as give emotional support, and facilitate KMC. The public health nurses provide health education on diverse health issues both in the wards and the outpatient clinics. Furthermore, they do follow-up care on discharged patients. Awareness creation is paramount in all spheres of life where change is desired as its overall effects cannot be overemphasized.

In this study, in order to drive the concept of KMC to the point of the clients' understanding, it was imperative to first identify their source of information. The study determined that participants lacked information about KMC before coming to the NICU and thus were vulnerable to receiving information from various sources, including other mothers of preterm infants. While not condemning these sources, it is good and proper to get health information from a healthcare practitioner who is well-trained. Doing otherwise will expose the clients to distorted information or half-truths which do not in any way add value to the issue at stake. The role of information and education about health issues, especially to the woman is viewed as very important in home and childcare practice and therefore cannot be overemphasized (Babalola & Fatusi, 2009). Lack of awareness by the mother can affect the health of the entire family, which a study in Nigeria supports by affirming that ignorance and lack of formal

education or non-availability of information is implicated as a cause of prematurity (Babalola & Fatusi, 2009).

The information dissemination mechanism in the health sector can be improved to reach all and sundry through varied means such as the radio and television, as rightly advocated by some participants. This can help reduce the resistance currently being faced by core traditionalists.

These findings align with one study in Uganda where some mothers who initiated good care practices for LBW newborns in the facilities did not sustain them at home probably due to lack of health education to sustain practice at home (Nabiwemba et al. 2014).

#### **5.10.2.1 Nurses and Doctors as Informants**

Information about health and illness are best provided by persons regarded as authority in such fields. Nurses and doctors fit perfectly here as it is part of the patients' bill of right to seek and be given information regarding their health in plain and simple language (AAPS, 1995). In this study, the nurses and doctors in the NICU actually performed their roles as far as information as KMC practice is concerned. However, same cannot be said of the public nurses who did not provide education and information in the ANC to the booked mothers in the health facility. This finding validates a report from Australia which reported general practitioners as the highest source of child health information source (Rhodes, 2016).

### **5.11 CULTURE AND CURRENT PRACTICE**

As previously explained in chapter two of this study, culture refers to a way of life of a people and are social practices that are learned. It is manifested in the mode of dressing, language, food, greetings, child rearing and upbringing as ways of relating to the elders (Sutan & Berkat, 2014). Africans are especially known to hold tenaciously to some aspects of their cultures.

Oyserman, and Lee (2008) asserted that the new generation is now rapidly influenced and ready to copy the “white man’s” culture, especially in issues of diet and dressing. This fact may be responsible for participants’ willingness and acceptability of the KMC concept. While the practice may be viewed as peculiar by some custodians of the culture because babies are carried on the back in many cultures, some respondents argued that KMC is actually an African concept which the white man gave a new name. Moreover, they likened KMC to the traditional African way of nursing babies by holding them close to the parents’ bosom as a show of love and affection; so they resolved and are not deterred by any misconception or ridiculing behaviour from others. This result is in contrast with a study in Aceh province in Indonesia which reported despite being aware of the potential dangers of some practices to neonates, people continue with these practices because “people live in the communities and household and want to maintain acceptable bonding relationships with others” (Sutan & Berkat, 2014:2). However, it supports a study in Uganda that reported LBW as not being appreciated as a danger sign in newborns and therefore mothers do not seek health care (Nabiwemba et al., 2014).

Mothers in this study though were unaware of the KMC concept prior to when their infants were admitted in the facility, made good of the information received and were willing and ready to brace all odds for the sake of their infants. This brings to mind the informal discussion the researcher had with the ADNS in charge of the NICU who confirmed that fathers are willing to provide KMC to their infants. She spoke glowingly about a father who opted to give KMC because the wife (infant’s mother) was very sick after parturition and the infant’s grandmother had to attend to her needs making them unavailable to provide KMC. These circumstances left him with no option; he braced all the odds such as being in the midst of women in order to ensure the survival of his baby.

The above scenario, shows that fathers are beginning to appreciate their roles in the care and survival of the neonates. Study reports where fathers felt uninvolved in KMC because of the patriarchal nature of the African family and genealogical setup. Many fathers think they do not have a role to play in neonatal care; hence they perceive this to be a purely female affair (Solomons & Rosant, 2012). Mothers and female healthcare professional were also indicted for not allowing fathers to be directly involved in neonatal care Charpak, & Ruiz-Peláez, 2006).

The practice of KMC does not involve warmth alone as rightly pointed out in the literature. Other benefits include psychosocial support, improved digestion and bonding (Nyqvist et al., 2010). The reasons for KMC practice in the study site in Edo State, was not primarily for warmth as the facility has enough incubators and resuscitators for oxygenation. Other benefits to the preterm infants are considered before introduction to KC when the infant is stable. This validates Morakinyo and Fagbamigbe (2017) assertion that neonatal mortality rate is still high in Nigeria because teaching hospitals do not abide strictly to KMC uptake because they have the infrastructure and facilities for neonatal care.

#### **5.11.1 Some elements of KMC as African Culture**

Culture refers to the way of life of a people and is guided by norms and tradition as to what is acceptable and what is unconventional or alien (Sutan & Berkat, 2014). Most observed African traditional culture regarding child rearing and nurturing are similar to the point of rocking the new born or infant close to the bosom or chest of the either parent. Bergman (2015) reported on the acceptability and similarities of some of the components of KMC in some African countries including, Nigeria, Zimbabwe, Rwanda and Mozambique. The Kangaroo nutrition was reported to hardly need special emphasis in rural Africa where exclusive breastfeeding is

often the norm. However, the Kangaroo position which involves skin-to-skin contact, and according to the WHO guidelines and accepted practice, the infant must be stable to be eligible. This is the norm in African culture; healthy infants are held for a brief period as a sign of affection and love which KMC also promotes.

### **5.11.2 Cultural Perception of a Peculiarity**

In Edo State and some parts of Nigeria, cultures and taboos abound regarding infant care (Chukuezi, 2010). The researcher can equally recall some of the culture of the Edo people in particular having originated from Edo State herself. This range from the newly delivered woman not going to the farm or market before a stipulated rest period of close to 3 months. The dead is not spoken ill of nor a husband by his wife while breastfeeding the baby. In furtherance to this, a domestic tree like orange or coconut tree is planted where the stump from the infants' umbilicus is buried. The survival of the tree indirectly denotes longevity of the owner of the buried cord stump. More instructive is the taboo not to discard soup if a male baby who is held on the mother's lap while she is eating inadvertently urinates into the soup. The mother is made to continue with the meal; doing otherwise could signify danger for the male baby. Some of these traditional beliefs and practices contribute immensely to the poor health status of pregnant women and children as reported by Chiwuzie' and Okolocha (2001) in their study of traditional belief systems and maternal mortality in a semi-urban community in southern Nigeria.

If KMC is therefore regarded as peculiar, the researcher believes it is the duration and timing that are peculiar. Infants are rocked and pacified on the mother's chest for a rather short duration (less than one hour) unlike that required for KMC and the use of wrapper, as well as leaving the mother bare chested. These may have informed the elders to see KMC as unusual.

In this study, KMC was regarded as “not our normal way of carrying babies” by some elder, but the parents are well-disposed to and practice it irrespective of deterrents arising from lack of understanding which is not based on cultural taboos; as there was none forbidding KMC. It therefore validates Charpak and Ruiz- Pelaez (2006), who reported direct skin-to-skin contact between a naked infant and the kangaroo position as improper by health care professionals, mothers and their families in cultures especially where physical contact is restricted. SSC contact between infants and their caregivers are perceived as inappropriate (Charpak & Ruiz-Pelaez, 2006).

The breastfeeding culture in Edo State in the past is that babies were breastfed by their mothers close to two years and breastfeeding was discontinued when they were ready for another baby. Early initiation was poor as this could be delayed for 48 hours because the mother had not started lactating and in some cases colostrum was discarded. This practice is currently changing due to instructive health information. During this waiting period the baby is fed on water only. For the preterm infants, because they are unable to suckle, they are fed with expressed breast milk in a cup using a teaspoon.

Respondents in this study exclusively breastfed their infants except one mother who was lactating poorly and had to supplement with baby formula. This finding is in contrast to Sultan and Berka (2014) in Indonesia that reported cultural practices among Acehnese as inappropriate antenatal care, late initiation of breastfeeding, discarding of colostrum and not practicing exclusive breastfeeding (EBF).

### **5.11.3 Emotions and Actions Created by KMC Practice**

The practice of KMC generated two types of emotions; positive emotions of happiness at the outcome of practice at seeing improvement in the infant’s wellbeing and negative emotions of



despair, unhappiness, fatigue and boredom brought about by restriction of movement. These feelings are expected in the circumstances under which the mothers find themselves. They were not prepared for the practice of KMC emotionally or physically before the concept was thrust on them; as they had no prior information. There is no gainsaying the fact that information is power; mothers of the LBW/preterm infants need information, as well as empathetic understanding from healthcare workers to overcome the difficulties encountered in practice. This supports Berg et.al (2012) who remarked that health workers active in neonatal care should provide support in terms of information, and assist in KMC practice. The respondents did have issues with the nurses who are unfriendly and have a negative attitude and who at times deprived them of the normal period to practice KMC. However, some respondents received support from some of the healthcare professionals whom one of them referred to as being kind and jovial.

The study reported negative emotions created by KMC practice. This finding is expected in the circumstances the mothers found themselves for which they were unprepared. Having to confine someone to one particular radius with no form of distraction is a boring and tiresome exercise. This point was reported as one of the problems affecting KMC sustenance by mothers (Dumbaugh et al., 2014). The fact that significant others did not accept the concept of KMC, as indicated in his study, and being ridiculed are issues that causes respondents to experience negative emotions. The best support for persons in such circumstances is empathetic understanding. Some of the mothers who practice KMC the study found, did so for the love of their babies with little regard for its acceptability by their significant others. A respondent remarked that her sister-in-law likes to talk too much, “instead of asking questions, she may just start saying things she did not know” This contradicts a study in China which posits that because people live in the communities and households and want to maintain acceptable

bonding relationships with others they accept practices they know are harmful or not convinced of its potential values (Hishamshah et al., 2010).

As with everything in life, positive emotion and action were exhibited by mothers at the obvious changes observed regarding the infant's health condition irrespective of the negative emotions expressed previously. These were evident in observing increase in weight gain and increased emotional attachment reported at the outcome of the practice which validate the concept of KMC as espoused by (Nyqvist, 2016). This evidence, coupled with the fact that there was no cultural taboo attached to KMC practice allowed for strong resolve by the participants to engage in the concept despite various deterrents. As some respondents rightly opined in this study, the infant must not be left to die because of custom and tradition. They agree that custom is important to maintain order in society, but argued that when an infant who cannot take decision is involved, it has to survive first and other decisions have to be taken at a later stage. In the meantime, the parents were ready to brace all odds for the child, which again did not agree with Hishamshah et al., (2010) in Malaysia. This could possibly be due to context under which KMC is practiced.

The role of the family and significant others on issues of ill health is paramount in bringing relief to the person undergoing a health challenge. This study reported the support enjoyed by mothers of LBW/preterm babies from their family members, including fathers of the preterm infants.

As stated earlier, this finding is in line with cultural norms in Africa where mothers have to seek consent first from their husbands before taking decisions regarding a child, including

KMC practice (Charpak, Ruiz-Peláez, & Gabriel, 2001). However, in order to ensure good spousal relationship, communication on issues such as KMC should be brought to the husband's attention in order to gain the full support needed.

## **5.12 CHALLENGES EXPERIENCED WITH KMC PRACTICE**

Despite the advantages of KMC, participants reported three major challenges: inadequate manpower, financial and physical challenges.

Inadequate manpower as observed by the respondents, was a probable reason for the nurses' poor attitude to clients in times of increased workload which may affect clients adversely. This challenge is not really surprising as it has been reported in literature that inadequate health-worker performance is a very widespread problem. Economic conditions of the country and health system was adjudged as one of the factors affecting health care practices in a country (Rowe, Savigny, Lanata, & Victora, 2005). Nigeria has been facing economic depression for some time which has had a very big impact on the health sector (Oleribe, Ezieme, Oladipo, Akinola, Udofia & Taylor-robinson, 2016). This had necessitated health workers shutting down hospital services. The most cited reasons for these lock out are poor healthcare leadership and management, demand for higher salaries and wages, infrastructural and inter-personal issues (Oleribe, et al., 2016).

High hospital bills were reported by some respondents who said parents are made to pay for some services before treatment and so wanted the government to do a downward review. The researcher found that NICU does not charge professional or consultation fees. However, charges for bed space depends on the days the neonate remained in the unit. Due to the long period of hospitalisation of these infants, the bills accumulate and become impossible for the

average the person to pay. Similarly, in the event that drugs or other essential items needed to attend to the baby are not immediately available in the hospital, the next best option would be to ask parents to provide same instead of turning them away. This is government unpopular effort that deprives institution of funding thereby forcing them to look inwards by increasing hospital bills (Chapter 4, sub section 4.4.5).

This corroborates a finding that administrators lack the resources to keep the KMC programme running and to empower personnel to provide holistic care for the preterm infant (Charpak & Gabriel Ruiz-Peláez, 2006). However, when one considers the state of the mothers, both mentally or physically at such critical periods, it is desirable that these essential items be made available at no cost to the parents for the sake of the infant. This finding is in line with the affordability of hospital user fees for infants to remain in hospital for a sufficient period of time as a major barrier in an Indonesian study (Pratomo et al., 2012).

Lack of adequate facilities is another major challenge as respondents reported that the mothers' room is overcrowded and they experience a lack of basic and household amenities like good beds and mattresses. The responsibility of fixing things such as plumbing and providing additional mattresses in the mothers' room by the authorities would alleviate this challenge.

### **5.13 SOLUTIONS AND RECOMMENDATIONS TO IMPROVE PRACTICE**

In order to allow for maximum utilisation of services, it is good customer-provider relationship to seek the views of customers on how to serve them better. The recommendations and solutions proffered by respondents are germane as it arose directly from what they have experienced with KMC practice. The first recommendation was making information available to the mothers of preterm on what the outcome of pregnancy could be by introducing KMC at the ANC.

Information should be disseminated via print and electronic media not only to mothers but to the general public to improve KMC awareness and acceptability.

The recommendation of increased manpower in the facility by the participants in this study is in line with previous work done by Charpak and Ruiz- Pelaez (2006) who reported staff perception of KMC as constituting extra workload in the already busy nature of NICU. The unit is actually a beehive of activity as respondents rightly commented. The researcher had previously reported this which had necessitated the chosen data collection method. Therefore, increasing the manpower will go a long way to solving some of the nurse-client infractions commonly reported in the healthcare industry.

The last suggestion by participants to increase the number of healthcare facilities in the state to practice KMC is actually the objective of this study. KMC can be practiced at any health facility because it does not require any special equipment or building. In addition, staff training and positive disposition to practice KMC by professionals and parents of the preterm infant is necessary. This is in agreement with a Columbian study by Sanabria and Martinez (1983).

## **5.14 CONCLUDING STATEMENTS**

The following concluding statements were derived from the results above and are presented according to the objectives of the study:

### **5.14.1 Concluding Statements Pertaining to Awareness Creation**

- ❖ Most healthcare facilities do not practice KC hence approximately half of admissions are referrals from other centres, including PHCs.
- ❖ There is ignorance of the KMC concept prior to admission in the unit.

- ❖ Participants received information from sources other than professionals which could be distorted. A case in point is participant M6 who was informed prior to her KMC practice what the concept was all about (Paragraph 5.3.13).
- ❖ Some elements of KMC has been part of African culture, it is only now given a new label that makes it foreign.

#### **5.14.2 Concluding Statements Pertaining to Culture and Current Practice**

- ❖ No known cultural taboos are hindering KC participants.
- ❖ There is universal acceptance that KMC is a method of showing love and affection to the newborn by parents.
- ❖ KMC is perceived as a peculiar and unacceptable method of child care by the elders.
- ❖ There is resentment by core traditionalists.
- ❖ The males and spouses are regarded as superior and dictate and take decisions regarding family matters, including child care practices such as KMC.
- ❖ Parents who practice KMC have the personal resolve and determination to disregard tradition and the opinion of others.

#### **5.14.3 Concluding Statements on Emotions and Actions Created by KMC Practice**

- ❖ KMC is fraught with negative emotions of fatigue, irritability, frustration, boredom, fear and despair.
- ❖ There is a positive emotion of happiness despite all the negative tendencies accompanying KMC practice.

#### **5.14.4 Concluding statements on Challenges**

- ❖ There are deterrents due to gossip, discouragement and misconceptions from friends and relatives.
- ❖ Nurses' poor attitude serves as deterrent.
- ❖ There is lack of privacy.
- ❖ Participants are not given adequate time to practice KC.
- ❖ Lack of human, physical, material and financial resources.

#### **5.14.5 Concluding statements on Recommendations**

- ❖ Timely information recommended.
- ❖ Increase in human, material and physical resources recommended.
- ❖ Increase in KMC dedicated health facilities recommended.

### **5.15 SUMMARY**

This chapter discussed the results of the qualitative study in line with reported studies in literature and themes that emerged from the analysis. The next chapter highlights the development of the strategy to enhance early KMC implementation in Edo State, Nigeria.

## **CHAPTER SIX**

### **PHASE TWO: STRATEGY DEVELOPMENT**

The purpose of this chapter is to portray the development of a strategy to enhance the early implementation of KMC guidelines in health facilities in Edo State, Nigeria. The chapter is divided into three sections. Section one is the development of the draft or primitive strategies by the researcher while the second section is the application of the Delphi technique to act as quality assurance to the developed strategy. The third section is the strategic document as set out in this study objective for use to enhance early KMC guidelines which was acclaimed and approved through consensus agreement by the Delphi panelists for use in any healthcare facility in Edo State.

#### **6.1 SECTION ONE: STRATEGY DEVELOPMENT PROCESS**

##### **6.1.1 What is a Strategy?**

Strategy is defined as the "art of planning and directing larger movements and operations" or a "plan of action" (Thesaurus, 2002). In literature, it is referred to as large-scale, future-oriented plans or efforts or deliberate actions that are implemented proactively and reactively, to outperform other organisations or to interact with the competitive environment to achieve the organisation's purpose or objectives, and to ensure customer satisfaction (Ehlers & Lazenby, 2010; Pearce, Robinson & Subramanian, 2000). According to Teece, (2010), strategies are an organisation's "game plan", which provides a framework for managerial decisions, and reflects the organisation's awareness of how, when and where it should compete; against whom and for what purposes it should compete. In like manner, it is defined as basic approaches a management selects for designing the action to solve a problem or accomplish a goal (Sawyer, 1990; 12). In this study, organisations refer to a health facility and unit/department.



The strategic process is described as a methodical, dynamic, entrepreneurial, structured process whereby an organisation defines its identity and purpose over time, and develops a vision and mission. It states its values and principles, identifies its direction and develops a unified approach to its strategies. Moreover, the strategic process enables the organisation to prioritise long-and short-term objectives, decide on actions to achieve these objectives, assign accountability and allocate financial resources, all of which are aligned to the environment to solve a problem or accomplish a goal (Teece, 2010; Ehlers & Lazenby, 2010). Furthermore, the strategic development approach supports the interaction of all stakeholders in an institution during the planning and implementation process of a programme. A strategic management philosophy encompasses all aspects of the organisation at all levels which is why it is an important mechanism for ensuring that the organisation succeeds in achieving its goals (Bryson, 1988).

This study adopts the strategic planning process for public and non-profit organisations by Bryson (1988). This strategic planning of process can be applied to projects, functions, such as transportation, healthcare or education. The process consists of the following eight steps:

a) Development of an initial agreement concerning the strategic planning effort; b) Identification and clarification of mandates; c) Development and clarification of mission and values; d) External environmental assessment; e) Internal environmental assessment; f) Strategic issue identification; g) Strategy development; and h) Description of the organisation in the future.

Strategic planning is aimed at helping both profit and non-profit organisations respond effectively to their new environment (Bryson, 1988). Strategy, in this study means a structured

plan, developed from a methodical process in which an organisation’s vision, mission, values and principles, goals and objectives and action plans and tactics are defined. The strategic process has undergone some reform and change in the last few decades due to modernisation and new technologies which have resulted in change in management process in organisations and enabled them to continually assess their environments thus persistently needing to change, improve and renew their organisation’s strategies in order to remain competitive in a rapidly evolving society (Ehlers & Lazenby, 2010). The new and emerging view of strategy contrasts dramatically with the traditional view as depicted in table 6.1.1.

**Table 6.1.1: Traditional and emerging view of strategy**

Concept	Traditional View	Emerging View
View	Strategy as fitted to resource.	Strategy as stretch and leverage.
Industrial space	Strategy as position in existing industrial space.	Strategy as creating new industrial space.
Responsibility	Strategy as top management activity.	Strategy as a total continuous organisational process.
Exercise	Strategy as an analytical exercise.	Strategy as an analytical and organisational exercise.
Direction	Strategy as extrapolating from the past.	Strategy as creating the future.

Source: Ehlers & Lazenby (2010).

This table reveals that the emerging view of strategy as stretch and leverage, creating new industry space and creating the future support the overarching objective of Total Quality Management, (TQM) that of continuous improvement (see chapter 2, paragraph 2.10.1). The views of strategy as being a total and continual organisational process and an analytical and organisational process encompass the Total Quality Management (TQM) principles of process improvement and total involvement (see chapter 2, paragraph 2.10.2).

The view of strategy in table 6.1.1 majorly applies to education as espoused by Coetzee (2010) who applied it in the assessment of the quality of Doctoral education in South Africa. A similar view of strategy as a dynamic process is held and applied to the healthcare industry as indicated by WHO which sees the strategic process of KMC implementation to comprise of four key dynamic processes, namely 1) situation analysis, 2) convening a stakeholders meeting, 3) visit functioning KMC sites and 4) develop action plans instead of laying down prescribed formula for actions that could become obsolete and not applicable to every given context (WHO, 2012).

The overall purpose of strategies, as discussed, is to solve a problem or accomplish a goal through adding value for customers which links to the TQM principle of customer focus. The strategic process of Bryson (1988) as listed above was used to develop a vision and mission, to identify values, principles and assumptions, and to formulate strategic objectives and functional tactics to enhance the implementation of early KMC guidelines based on TQM philosophy. Note however, that not all aspects of the strategic process was investigated in this study because the study site was a Federal Government health institution that has designated organs responsible for measuring and evaluating its services. This made for assumptions and processes already established such as items 1 & 2 above.

### **6.1.2 Basis for Strategy Development**

Having a strategy in place guarantees more beneficial service outcomes than traditional and institutional long range planning which in most cases are well-suited in generating insights and relationships that produce value creation and sustained programme accomplishment and service

delivery (SUNO, 2010). Accordingly, some of the benefits of having a strategic formulation as espoused by Pearce and Robinson (2000; SUNO, 2011) are:

- ❖ Strategy formulation activities aid the organisation's ability to prevent problems because of the involvement of all stakeholders during the planning process.
- ❖ Group-based strategic decisions are likely to be drawn from best available alternatives.
- ❖ Gaps and overlaps in activity amongst groups and individuals are reduced as participation helps to clarify differences in roles.

Consequently, the researcher chose to develop a strategy to enhance the early implementation of KMC guidelines in health facilities in Edo State, Nigeria by means of the application of the health policy analysis triangle of Walt and Gilson (1994), to explore the actors (OHWs, administrators and mothers of preterm infants) regarding their knowledge of the KMC guidelines (content), how the guideline is being implemented (process) and the circumstances or cultural issues regarding KMC (context).

It is imperative to remember that KMC will not be the only aspect of the strategy, but when combined with the other aspects identified, like improved infrastructure and human resources, the set goal of improved service delivery through proper policy implementation can be achieved. This study stresses the important role played by OHWs in neonatal nursing practice which has been largely ignored when strategies are formulated in the public health sector.

### **6.1.3 Concluding Statements Forming the Basis of the Strategy Formulation**

Forty-three (43) conclusion statements were formulated from the empirical research (see chapter 4 and 5) which formed the evidence base for the development of a strategy to enhance

implementation of early KMC guidelines in health facilities in Edo State, Nigeria. Concluding statements are indicated by the use of numbers in table 6.1.3 below so as to make it easy for the reader to form links between the concluding statements, the strategic objectives, the action plan and the specific tactics. (Refer to paragraph 3.5 for a discussion of the research method applied to development of the strategy). Table 6.1.3 presents the list of concluding statements which were made with regard to implementation of KMC in health facilities in Edo State.

Table 6.1.3 Concluding statements from the empirical research

The knowledge, attitude and practice of OHWs in Edo State, Nigeria regarding KMC guidelines; challenges and recommendations	Attitude of administrators towards the implementation of early KMC guidelines in healthcare facilities in Edo State; Challenges and recommendations	Effects of socio-cultural practices on KMC uptake by parents of preterm and LBW infants in Edo State, challenges and recommendations.
1. There is inadequate number of nurses trained in neonatal care (see paragraph 4.4.1).	15. There is no agreement on all aspects of the KMC advantages by the respondents 1(25.0%) (see paragraph 4.7.2).	25. Most healthcare facilities do not practice KMC hence approximately half of admissions are referrals from other centres, including PHCs. (see paragraph 5.14.1).
2. The employees who have work experience of 5-9years constitute majority 20 (36%) of the work force. (see paragraph 4.4.1).	16. Facilitating KMC is regarded as an extra burden on the staff (see paragraph 4.7.2).	26. There is ignorance of the KMC concept prior to admission in the unit (see paragraph 5.14.1).
3. There is overall good knowledge by the OHW on some aspects of KMC, especially breastfeeding the infant while in the KC position (see paragraph 4.4.2)	17. There is a reluctance by NIC nurses to initiate and practice KMC 4.7.5).	27. Participants received information from sources other than professionals which could be distorted. A case in point is participant M6 who was informed prior to her KMC practice what the concept was all about (Paragraph 5.3.13) (see paragraph 5.14.2).
4 There is consensus that facilitating kangaroo care is an added burden to the health staff (see paragraph 4.4.3)	18. There is a lack of space in NICU to implement KMC (see paragraph 4.7.5).	28. Some elements of KMC has been part of African culture, it is only now given a new label that makes it foreign (see paragraph 5.12.1).
5. There is a weak positive correlation between knowledge and attitude to KMC. This means that the OHW's attitude to KMC is not affected by the amount of knowledge they possess (see paragraph 4.4.3)	19. There is a lack of sufficient fund to send staff for KMC training & workshops (see paragraph 4.7.5).	29. No known cultural taboos are hindering KC participants (see paragraph 5.14.2).
6. There is no participation in training programmes on KMC ( see paragraph 4.4.4)	20. There is a lack of funds to provide physical infrastructure (see paragraph 4.7.5).	30. There is resentment by core traditionalists. (see paragraph 5.14.2)
7. There is no supervision in KMC	21. More training and awareness on	31. KMC is fraught with negative emotions of fatigue,

technique. (see paragraph 4.4.4)	KMC concept recommended (see paragraph 4.7.5).	irritability, frustration, boredom, fear and despair (see paragraph 5.14.2).
8. There is lack of understanding of institutional policy on KMC (see paragraph 4.4.5)	22. Increased effort for provision of KMC guideline to reach of all staff members (see paragraph 4.7.5)	32. KMC is perceived as a peculiar and unacceptable method of child care by the elders (see paragraph 5.14.2).
9. There is weak insignificant relationship between knowledge and practice of KMC (see paragraph 4.4.2)	23. Improvement in staff complement is recommended (see paragraph 4.7.5).	33. There is universal acceptance that KMC is a method of showing love and affection to the newborn by parents (see paragraph 5.14.2)
10. There is non-availability of KMC protocol and guidelines (see paragraph 4.4.5)	24. Equipping the mothers' room in the facility is recommended (see paragraph 4.7.5).	34. The males and spouses are regarded as superior and dictate and take decisions regarding family matters, including child care practices such as KMC (see paragraph 5.14.2).
11. There are no refresher programmes on KMC for staff. (see paragraph 4.4.5)		35. There are deterrents due to gossip, discouragement and misconceptions from friends and relatives (see paragraph 5.14.2).
12. There is lack of KMC materials and facilities. (see paragraph 4.4.5).		36. Parents who practice KMC have the personal resolve and determination to disregard tradition and the opinion of others (see paragraph 5.14.2).
13. Nurses in the NIC are reluctant to initiate and practice KMC (see paragraph 4.4.5).		37. Nurses' poor attitude serves as deterrent (see paragraph 5.14.4).
14. Employment of adequate health workers 25 (45.5%) (see paragraph 4.4.6).		38. There is lack of privacy (see paragraph 5.14.4).
		39. Participants are not given adequate time to practice KMC (see paragraph 5.14.4).
		40. Lack of human, physical, material and financial resources
		41. Increase in human, material and physical resources recommended (see paragraph 5.14.5).
		42. Timely information recommended (see paragraph 5.14.4).
		43. Increase in KMC dedicated health facilities recommended (5.14.5).

#### **6.1.4 Strategy Formulation for the implementation of early KMC guidelines in Health Facilities in Edo State, Nigeria**

The strategy to enhance early implementation of KMC guidelines in health facilities in Edo State, Nigeria was formulated from concluding statements that were generated from the empirical study (see paragraph 5.2) by means of the application of Bryson's (1988) strategic development process to develop a vision and mission statement, identify values, principles and assumptions and formulate strategic objectives and functional tactics based on the total quality management philosophy of Tenner & DeTorro (1992). Each step of the strategic process was followed in the development of the strategy to enhance early KMC implementation guidelines in Edo State.

##### **6.1.4.1 Assumptions**

The strategy to enhance the early implementation of KMC guidelines in Edo State, Nigeria is influenced by several assumptions. The explicit statement of these assumptions is important as it provides a point of departure for the interpretation of the strategy to enhance the early implementation of KMC guidelines in Edo State, Nigeria and ensures clear communication between the researcher and the reader.

The strategy is influenced by the following assumptions:

- a) The strategy is developed for use within the health services context of Edo State, Nigeria.
- b) In order to enhance the early implementation of KMC guidelines in Edo State, Nigeria, the strategy must be interpreted in terms of the philosophy of TQM, which is centered on the theoretical foundations of systems theory, variation (statistical theory), theory of knowledge and theory of psychology; although these theories are not pertinently subscribed to in this



strategy. In this study, TQM is based on three fundamental principles that encompass its overall concept and, if they are efficiently applied, will promote the continuous improvement of all health facilities whether private or public tertiary/secondary/PHCs/units.

The three fundamental principles of TQM are: focus on the customers, internal and external (operational health workers, administrators and parents of preterm/low birth weight infants); process improvement and total involvement with six components of elements namely: leadership, team work, communication, support structure, employee involvement as well as education and training,

c) In this strategy, the customer focus is applied to internal customers which are the operational health workers and administrators and external customers- parents of the preterm babies and the society-at-large.

d) The strategy is viewed as "living" because nursing practice is dynamic and rapidly evolving, which influences, and to some degree constrains the quality of nursing practice in Nigeria. As a result, health facilities; tertiary/secondary/PHCs/units must continually assess the quality of nursing practice by using the Federal Ministry of Health criteria with regard to the nature of its mission aimed at the knowledge, practice and attitude of health workers geared towards a comprehensive framework for harnessing all resources for health development towards the achievement of Universal Health Coverage as explained in the National Health Act in tandem with the Sustainable Development Goals (SDGs, 2030). This is necessary in order to change, revise and renew the strategy and measurement objectives and functional tactics to continuously enhance the early implementation of KMC guidelines in Edo State, Nigeria.

e) The vision of the strategy gives rise to the mission, and both of these are driven by the values, principles and assumptions of the strategy are based on the philosophy of TQM. Therefore, to change, revise or renew the strategic objectives and functional tactics of the strategy all these fundamentals must be considered and subscribed to.

#### **6.1.4.2 Context**

The context in which the strategy is formulated relates to KMC implementation in all health facilities in Edo State, Nigeria. The concluding statements that were used to formulate the strategy are from the empirical data derived from the exploration of operational health workers, administrators and mothers of preterm infants in a tertiary health facility in the public sector; therefore, this cannot be generalised to other contexts but can be adapted to be suitable to a particular situation.

#### **6.1.4.3 Process**

As previously indicated in this chapter (6.1) the focus of this strategy will be on the following aspects on the process of the strategy formulation:

- ❖ Vision
- ❖ Mission
- ❖ Values
- ❖ Principles
- ❖ Goals and objectives
- ❖ Action plan and tactics

#### **6.1.4.4 Vision**

Identification and development of a strategic vision for the organisation is the first step of any strategic planning process because it provides the framework for strategic planning. A vision statement is an organisation's inspiration and framework for its strategic planning (SUNO, 2010). The vision statement answers the questions: "What do we want to become?" or "Where do we want to go?" and focuses on what the organisation's long-term direction should be, the technology-product-customer focus it intends to pursue, and its future scope (SUNO, 2010). In other words, it denotes the direction or purpose or dream and hopes of the organisation and shapes the organisation's identity. The committee that drafted the strategy for the Southern University of New Orleans (SUNO), posits that the vision of the organisation serves as a "road map" or inspiration of the organisation's desired future. They further asserts that the vision statement may apply to the entire organisation or to a single unit of that organisation or division.

To develop a vision and mission for the operational health workers in the NICU and public health units, the researcher viewed the three main stakeholders in the provision of health services in Edo State, namely the Federal Government of Nigeria as represented by the Federal Ministry of Health (FMOH), the University of Benin Teaching Hospital and the National Association of Nigeria Nurses and Midwives (NANNM).

The vision of the FMOH is: "To develop and implement policies that strengthen the national health system for effective, efficient, accessible and affordable delivery of health services in partnership with other stakeholders" (FMOH, 2011). This vision was reversed in the National

Health Policy Draft of 2016 as “Universal Health Coverage (UHC) for all Nigerians” (FMOH, 2016).

The vision of UBTH is: “To be a major key player in health care delivery, research and training in Nigeria and Africa at large” (<http://www.Ubth.Org/Main.Php?>).

The NANNM has its vision and mission stated together as: “To regulate the practice and activities of Nigerian Nurses and Midwives in the most efficient manner that safeguards best healthcare.

In the researcher’s bid to develop a strategy to enhance the implementation of early KMC guidelines in healthcare facilities, the following vision was formulated as stated below in the ensuing paragraph. The vision for the operational health workers, administrators and parents of preterm/LBW in Edo State, Nigeria was developed from elements of each of the aforementioned stakeholders’ vision to include not only the health seekers but the health workers who provide services, as well as from the research findings (refer to concluding statements 3,4,5,7,8,9,12,29,30,43).

**Vision:** “To provide kangaroo care to preterm infants through facilitation by their parents that will enable transformation of better skills from operational health care workers to improve the knowledge of parents of preterm and LBW infants in neonatal care through excellence in nursing practice to reduce neonatal mortality globally’.

#### **6.1.4.5 Mission**

A mission statement is an enduring statement of the unique purpose of an organisation that distinguishes it from similar ones. It defines the broad purpose for which an organisation exists. (Pearce & Robinson, 2000). The mission identifies the present scope of the organisation's operations in terms of its present capabilities, customer focus, activities, makeup, product, market, and technology. It provides answers to the questions: "Who are we?" and "What do we do?" A mission statement embodies the philosophy, values, identity, character and priorities of an organisation, and also reflects the image the organisation wants to project. A mission statement is not about measurable targets, but is rather a statement of intent, attitude, outlook and orientation (Ehlers & Lazenby, 2010; Pearce & Robinson, 2000).

The mission statement of the FMOH is “To provide stake holders in health with a comprehensive framework for harnessing all resources for health development towards the achievement of Universal Health Coverage as the National Health Act in tandem with the Sustainable Development Goals (SDGs)”

The Mission statement of UBTH is: “To provide effective and efficient training of health professionals, quality research and equitable service delivery with empathy towards our clients”

As stated previously, NANNM has its vision and mission statement in one phrase.

“To regulate the practice and activities of Nigerian Nurses and Midwives in the most efficient manner that safeguards best healthcare”.

The mission statement highlights one of the aspects of awareness creation which is in partnership with other stakeholders. In this case, the emphasis is both on external and internal stakeholders (the operational health workers and administrators) who need to ensure the quality and efficiency of healthcare services they provide to their clients (parents of preterm babies and the general public). It is assumed that the FMOH has expressly included these in their mission statement; however, based on the research findings, the following mission statement was formulated (refer concluding statements 16,17,18,19,20,21,22,23,24, 26,27, 29,36):

**Mission:** *“To reduce neonatal mortality rate through effective, efficient and dynamic global nursing practice by the operational health workers, the administrators.”*

#### **6.1.4.6 Values**

Values are freely chosen, enduring beliefs or an attitude towards a person, object, idea or action. It represent a way of life, give direction to life, and form the basis of behaviour, especially behaviour that is based on decisions or choices (Burns & Grove, 2014). In an organization, values dictate the way that decisions are made and embody what the organisation stands for. Values influence the policies, the type of competitive advantage sought, the organisation structure, systems of management, the strategies and the functional tactics of the organisation (Thompson & Strickland, 2001). It is therefore important to attempt to understand the values that are common to the health workers, the administrators and the parents of preterm infants within the health facilities in Edo State, Nigeria. The study has established that most of the values the participants hold with regard to KMC have a strong influence on policy implementation. In order to fulfill the vision and mission of the OHW the following values are central and drive this strategy:

**Collaboration:** Collaboration is derived from the Late Latin word "collaborare", meaning "to work". To work jointly with others. Collaboration is a voluntary and willing association and interaction between individuals and organisations with a common destiny, especially in a joint intellectual effort, that bring diverse skills and perspectives to a task and accomplish agreed upon objectives (Dictionary.com, 2004).

**Diversity:** Diversity is derived from the old French word "diversite", meaning the quality of being diverse. Diversity is the acceptance and appreciation of a point or respect in which things differ, whether culture, thought and experience; and the integration of these in a task (Dictionary.com, 2004; Thesaurus, 2002).

Edo State is made up of 18 LGAs which are further divided into three senatorial districts based on geographical location, ethic and traditional values. Furthermore, the dedicated KMC unit receives referral cases from neighbouring states such as Delta and Kogi states whose culture and tradition differs from one another and that of the Edo people.

**Excellence:** Excellence is a state or condition of an excellent or valuable quality. It is a condition of demonstrated superiority or virtue (Dictionary.com, 2004).

**Innovation:** Innovation is the generation, discovery and integration of new ideas and methods through creative inquiry and brings changes in anything established (Dictionary.com, 2004).

**Integrity:** Integrity is derived from the Latin adjective "integer" meaning whole or complete. It refers to unconditional and steady commitment to moral values and ethical principles, and

meaningful, mature and coherent wholeness between the person's espoused moral values and actions. Integrity is the quality of a person who can be counted on to give precedence and adhere to moral values and ethical principles, even when there is strong inducement to pursue self-interest or personal desires (Dictionary.com, 2004; Shahriari, Mohammadi, Abbaszadeh, & Bahrami, 2013).

It is the general expectation that health care workers should possess integrity so as to gain the confidence and trust from the recipient of care (Shahriari, Mohammadi, Abbaszadeh, & Bahrami, 2013).

**Respect:** Respect is derived from the Latin word "respicere" meaning to look back at or to look again. Respect is the acknowledgment, esteem, consideration and regard for the ideas and unique contributions of others ((Dictionary.com, 2004; Shahriari et al., 2013).

These values were subscribed to in the development of the vision, mission, strategic objectives and the functional tactics of the strategy to enhance early KMC implementation guidelines in Edo State, Nigeria.

#### **6.1.4.6.1 Social values of the FMOH**

- ❖ Right to highest attainable level of health as a fundamental right of every Nigerian which includes access to timely, acceptable and affordable care of highest quality and international best practice.
- ❖ Maintenance of professional ethics through human dignity and human rights, confidentiality and cultural sensitivity.



- ❖ Shared responsibilities and mutual accountability of both the client and the provider in health promotion, health seeking and service provision.
- ❖ Gender equity and responsiveness, culturally sensitive and social accountability to be taken into account by all actors in the health system.
- ❖ Sustainable political commitment to health through ensuring adequate resource allocation to health and commitment to national and international declarations
- ❖ Equity in access and use of services.

#### **6.1.4.6.2 Formulated Values for the OHW and Managers**

Based on the above principles, the applicable ones relevant to the study were selected to reflect the under stated values for the OHW and the managers.

- ❖ *“Maintenance of professional ethics”*
- ❖ *“Cultural sensitivity to gender, shared responsibility and commitment to international best practices for health”.*

#### **6.1.4.7 Principles**

Principles refer to an accepted or fundamental basis of conduct, action or management for application in action (Dictionary.com, 2004; Thesarus, 2002).

In order to ensure that the principles of the strategy to enhance early implementation of KMC guidelines are common and applicable to all health facilities, whether private or public; tertiary/secondary/PHCs/unit health facilities in Edo State, Nigeria, the researcher formulated her own principles from that of the Federal Ministry of Health (FMOH) that are applicable to the study. These are highlighted in the National Health Policy Draft 2016: *To Promote the*

*health of Nigerians to accelerate socio-economic development* (FMOH, 2016:17) See paragraph 3.4.2.

- ❖ PHC shall be the bedrock for national health system
- ❖ The attainment of universal coverage shall be the basic philosophy and strategy for national health development.
- ❖ All health sectors shall ensure the use and provision of health services that are gender sensitive, evidence based, responsive, pro-poor and sustainable with a focus on outcome.
- ❖ Government shall ensure quality healthcare at all levels.
- ❖ Government shall provide policy support and funding and take active measures to involve all private health sectors and other stakeholders.
- ❖ Promotion of inter-sectoral action for health and effective partnership among all relevant stakeholders for health development by mainstreaming health in all policies.
- ❖ Focus on the poor and vulnerable in all health interventions.

#### **6.1.4.7.1 Formulated Principles for the OHW and Managers**

The FMOH principles from above that are applicable to the study were formulated as stated below.

- ❖ *“To provide sustainable evidence based, responsive, gender sensitive and pro-poor health care to the preterm infants”*
- ❖ *“To facilitate and encourage kangaroo care by parents with a focus on good outcome’*

Table 6.1.4.7 represents the application of the principles of the FMOH to the strategy to enhance early implementation of KMC guidelines in health facilities in Edo State, Nigeria.

**Table 6.1.4.7: Application of FMOH Values and Principles to KMC**

FMOH VALUES	APPLICATION OF VALUES
Grassroots and universal coverage	All health facilities, tertiary/secondary/PHCs/units must see health and KMC provision as a fundamental right of every Nigerian neonate and ensure its service provision at all levels. Individuals must have access to timely, acceptable and affordable KMC care of highest quality and international best practice.
Equity	Health facilities, tertiary/secondary/PHCs/units must provide equal opportunities for individuals to seek and receive KMC nursing care. All health facilities, tertiary/secondary/PHCs/units must be gender sensitive, evidence based, responsive, culturally sensitive and socially accountable to all actors in the health system with regards to KMC implementation.
Development	All health facilities, tertiary/secondary/PHCs/units must maintain sustainable political commitment to KMC implementation through ensuring adequate resource allocation and utilisation of resources; involve the health sector and other stakeholders' commitment to national and international declarations of KMC sustainability.
Quality	All health facilities, tertiary/secondary/PHCs/units must maintain professional ethics through human dignity and human rights, confidentiality and cultural sensitivity in its KMC implementation care services.
Democratisation	Decisions made in all health facilities, tertiary/secondary/PHCs/unit level should be transparent, representative and participatory.  All health facilities, must develop shared responsibilities and mutual accountability to both the client and the provider in health promotion, health seeking and service provision of KMC
Effectiveness and efficiency	All health facilities, tertiary/secondary/PHCs/units must function in such a way that it leads to desired outcomes or achieves desired objectives of KMC, while making optimal use of available resources.
Public accountability	All health facilities, tertiary/secondary/PHCs/units are accountable for their actions and decisions concerning KMC not only to their governing bodies and their respective health management boards but also to their stakeholders and customers, internal and external.

**6.1.4.8 Goal /Aim**

Each strategy should have a goal and objectives to inform functional plan.

In this study, the aim of the strategy was to enhance early implementation of KMC guidelines in health facilities in Edo State, Nigeria.

The following is a discussion of the objectives for reaching the set goal.

#### **6.1.4.9 Strategic Objectives**

Objectives are plans or road maps aimed at achieving a goal (SUNO, 2010). They can be classified as long-term and short-term objectives. The long term objectives are the statements that are made to indicate the results that the programme seeks to achieve over a period of time (Pearce & Robinson, 2000). These objections provide a general approach in guiding major actions designed to accomplish a programme's major outcome and long-term objectives. In the strategic process, strategic objectives are the long-term goals that are determined in line with the managements' vision and reflect the organisation's direction on a high level (Ehlers & Lazenby, 2010; SUNO, 2010).

In this study the aim for the development of a strategy was to enhance the early implementation of KMC guidelines in Edo State, Nigeria. The strategic objectives were determined in line with the vision, mission, values, principles and assumptions of the strategy to enhance the early implementation of KMC guidelines in Edo State, Nigeria and were based on the forty-three (43) problems identified from the empirical research and literature review in phase one (see Paragraph 6.1.3). These problems were clustered together to develop five strategic objectives through deductive and inductive logic, to enhance the early implementation of KMC guidelines in Edo State, Nigeria. The strategic objectives were also based on TQM philosophy (see paragraph 2.10.1.3) with the goal of continuous improvement of the quality of nursing practice in Edo State in particular and Nigeria in general and a focus on total involvement, process improvement and customer focus (refer Paragraph 2.10.1.4 2 in chapter 2). The long-term objectives focused on the areas of knowledge acquisition, employee development, service delivery and public responsibility. These objectives had to be

acceptable, flexible, measureable, motivating, sustainable, understandable and achievable. A table was developed in order to put these factors in a matrix for ease of tracing and monitoring over a period of time. A time frame is set, in that a marked improvement in KMC implementation in at least year one of the implementation of the strategy is expected.

The six strategic objectives to enhance the early implementation of KMC guidelines in Edo State, Nigeria are presented in Table 6.1.4.9. Each strategy objective is stated with the problems identified/concluding statements (see Table 6.1.3) from the empirical research serving as the evidence base.

**Table 6.1.4.9: Objectives of the KMC strategy**

OBJECTIVE	PROBLEM IDENTIFIED/EVIDENCE
To improve the knowledge, attitude and practice (KAP) of OHWs (OHW) in all healthcare facilities; private/public, tertiary/2 <sup>nd</sup> /PHC/units in Edo State, Nigeria	Some OHW workers lack knowledge on some aspects of KMC which may affect their attitude to practice & thus serve as hindrances in KMC facilitation and practice (concluding statements 3; 5; 6; 7; 8; 9; 10).
To negotiate improvement in human resources for nursing practice especially neonatal trained nurses in healthcare facilities; private/public, tertiary/2 <sup>nd</sup> /PHC/units in Edo State, Nigeria.	All the respondents in the study reported shortage of personnel as one of the major deterrent to KMC practice (concluding statements 14; 15; 40, 43).
To improve neonatal services through staff development and involvement in decision making in an all-inclusive environment of decision making in healthcare facilities; private/public, tertiary/2 <sup>nd</sup> /PHC/units in Edo State, Nigeria	All respondents in the study reported dissatisfaction with the level of physical infrastructure and empowerment in terms of training (concluding statements 1; 3; 5; 6; 8; 17; 37).
To improve infrastructure for both staff and parents of preterm infants in private/public, tertiary/2 <sup>nd</sup> /PHC/units in Edo State, Nigeria.	All respondents in the study reported inadequate facilities for practicing KMC and lack of infrastructure (concluding statements 11; 18; 23; 24; 38; 43).
To reduce the effect of socio-cultural practices through the optimisation of the information dissemination system to reduce misconceptions and create awareness of KMC in the communities, all health facilities; private/public, tertiary/secondary/PHCs/units in Edo State, Nigeria.	An increased number of mothers of preterm infants lacked awareness of KMC concept prior to baby's hospitalisation and reported deterrents to practice (concluding statements 28; 29; 30; 32; 36).
To establish an enabling working environment that focuses on the needs of the OHW and parents of preterm babies in health care facilities: private/public, tertiary/2 <sup>nd</sup> /PHC/units in Edo State, Nigeria	An increased number of participants recommended the establishment of KMC dedicated facilities in the state and expressed lack of cooperation from managers and access to vital documents on KMC (concluding statements 11;13;15; 24;39).

#### 6.1.4.10 Functional Tactics

Having developed the objectives, it is imperative to put measures in place for its execution.

The development of short-term objectives is one of the processes through which a strategy may be implemented thus realising the long-term objectives, as the day-to-day action plans and tactics arising from working to achieve the short-term objectives can be measured and

monitored. Establishing short-term objectives help in the implementation of policy through the process of operationalisation of the long-term objectives and the identification of measurable outcomes of the functional activities. This can be achieved through a proper feedback mechanism and evaluation process (Pearce & Robinson, 2002).

Short-term objectives were developed in this study with a monitoring and evaluation timeframe of one year to track progress of how KMC implementation has reduced neonatal mortality rate in Edo State. The strategic objectives serve as the basis for more specific functional tactics or short-term goals, which are formulated at an operational level and can be monitored and evaluated (Ehlers & Lazenby, 2010; Peace & Robinson, 2000).

In this study, the action plan and functional tactics were developed from the strategic objectives which were based on the forty three (43) problems identified (see paragraph 6.2.3) from the empirical research in order to enable operationalisation and implementation of the strategic objectives. The functional tactics were further applied to the six (6) principles and values i.e. the mission of the FMOH (2016) to allow monitoring and evaluation of the strategic objectives. The functional tactics were also based on TQM philosophy (see paragraph 2.16) through the application of the six elements of TQM i.e. leadership, communication, team work continuous improvement, employee involvement, education and training to ensure that the principles of total involvement, process improvement and customer focus and the overall objective of continuous improvement are achieved.

Figure 6.1.4.10 presents the functional tactics to enhance the early implementation of KMC guidelines in health facilities in Edo State, Nigeria, which are derived from the strategic objectives and based on the problems identified from the comprehensive literature review and

the empirical research, and the TQM elements. The problems identified are presented in the blue key and applied to the functional tactics using the code Problem Identified (PI) numbered 1-43 in blue coloured text. The TQM elements are presented in the peach key and applied to the functional tactics using the code Total Quality Management elements (TQMe) numbered 1-6 in peach coloured text.

<b>KEY:</b> <b>PROBLEM IDENTIFIED</b> <b>(P1)</b> <b>P1-43(See table 6.3)</b>	<b>KEY:</b> <b>TOTAL QUALITY MANAGEMENT</b> <b>(TQMe)</b> <b>TQMe 1. Leadership</b> <b>TQMe 2. Communication</b> <b>TQMe 3. Teamwork</b> <b>TQMe 4. Support structure</b> <b>TQMe 5. Employee involvement</b> <b>TQMe 6. Education and training</b>
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**Figure 6.1.4.10: TQMe Elements and Functional Tactics**



**Table 6.1.4.10 Functional plans and Tactics**

STRATEGIC OBJECTIVES	FUNCTIONAL PLAN	TACTICS
<p>1. To improve the knowledge, attitude and practice (KAP) of OHWs in all healthcare facilities; private/public, tertiary/secondary/PHC/units in Edo State, Nigeria</p>	<p>1.1 The health facilities; private/public, tertiary/secondary/PHCs/units' vision, mission, goals; and objectives must be aligned with health services and contribute to the goals and strategic directions of nursing practice in general ( P3;5;6;7;8;9;10; TQMe; 1.4, 6).</p> <p>1.2 The health facilities; private/public, tertiary/secondary/PHCs/units' must build on the strengths and resources of the health personnel and institutions in order to maximise its full potentials (TQMe 1.2, 3, 4).</p> <p>1.3 The health facilities; private/public, tertiary/secondary/PHCs/units should independently develop acceptable and realistic methods, tactics and standards for OHW based on their environment and peculiar context (PI 14,15,16,17,18,19,20; TQMe:1,3,5,6).</p>	<p>Annual review of objectives in the form of seminars and workshop presentations on the trends and current practices on neonatal mortality reduction.</p> <p>Orientation document to be prepared for new staff and made freely available of charge on first day at work.</p> <p>Quarterly seminar and study day for OHW. Nurse facilitators encouraged to give presentations. Train the trainers' workshop to increase manpower and practice of KMC bi-annually.</p> <p>Encouragement and incentives in the form of special allowances and recognition for hard work to neonatal nurses annually by management.</p>
<p>2. To negotiate improvement in human resource base for nursing practice, especially neonatal-trained nurses in healthcare facilities; private/public, tertiary/secondary/PHC/units in Edo State, Nigeria</p>	<p>2.1 Draw the government and public awareness of personnel shortage in clinical nursing practice especially (neonatal nurses) in health facilities/Tertiary/ Secondary/ PHCs/ Units (PI4; 15;40; 43; TQMe 1, 2, 4, 5).</p> <p>2.2 Develop position paper and statements that highlight the OHW shortage issues, factors contributing to shortage and strategies to expand the current and future pool of nurses in clinical practice (PI 7, 8, 27, 29, 31, 34; TQMe 1, 4, 5).</p> <p>2.3. Advocate for the development and implementation of</p>	<p>Encourage management to improve manpower supply by continued evidence based position paper and lobbying through NANNM and facility pressure groups like staff associations and workers union to highlight effect of manpower shortage on the staff and clients.</p> <p>Publish and display line of progression of the nurses in clinical practice and other areas of specialty in neonatal care to increase interest</p> <p>Encourage nurses in the nursing and midwifery</p>

	<p>workforce planning for health workers (OHW) at all health facilities; private, public/tertiary/secondary/PHCs/ units which highlights both current need and future demand for health workers in Edo State. (PI 3, 4, 7, 8, 9, 27; TQMe1, 2, 4, 5).</p> <p>2.3.1. Increase the pool of potential OHW at all health facilities; private/public/tertiary/secondary/PHCs/units (PI 7, 27.29, 31, 33; TQMe1, 3, 4, 6).</p> <p>2.3. 2. Create personnel scholarships for post-basic nursing for those who would like to pursue a career in neonatal nursing, so they can pursue full-time study (PI 7, 27.29, 31, 33; TQMe 2, 4, 6).</p> <p>2.3.3 Arrange workshops and in-service training of the FMOH current best practices in healthcare delivery (PI 27, 33, 34; TQMe 2, 6).</p> <p>2.3.4. Increase awareness and acceptance of KMC through multidispliary approach PI</p>	<p>schools to develop interest in neonatal nursing by sending OHW on study leave with pay; organise seminars and talk shows at schools to increase interest in practice.</p> <p>Nurses trained in neonatology should remain in dedicated units and not transferred to other units in the facility.</p> <p>Annual prize and incentive for best patient-friendly nurse Institute an annual award plaque and monetary incentive backed by scholarship for best neonatal nurse in the nursing and midwifery schools.</p> <p>OHW to register with professional body and attend at least one sponsored workshop annually as a pre-requisite for promotion to the next level.</p> <p>Inter professional (e.g. doctors, nurses, community health workers) and multi sectoral collaboration (Health, Agriculture, Gender, and relevant developmental partners and community leaders.</p>
<p>3. To improve neonatal services through staff development in an all-inclusive environment of decision making in healthcare facilities private/public, tertiary/secondary/PHC/units</p>	<p>3.1 Create an administrative clinical nursing programme coordinator post to maintain a complete record-keeping system of neonatal practices and trends to enable appropriate, regular and coordinated communication amongst staff in all the health facilities (PI 11, 14, 24; TQMe 1, 4, 6).</p> <p>3.2 Publish the FMOH policies and document which are</p>	<p>Display the KMC policy guide documents on all notice boards in health facilities and units.</p> <p>Publish and disseminate the KMC guidelines to all staff in neonatal and midwifery units in the form of a handbook free of charge.</p>

<p>in Edo State, Nigeria.</p>	<p>relevant to health services and practice so that expectations and requirements of the nursing practice in the institution and unit are clear and explicit (PI 2, 3, 4, 7; TQMe 1, 2, 5).</p> <p>3.2.1 Develop and implement health information /education programmes in the ANC (PI 13, 32; TQMe, 2, 3).</p> <p>3.2.2 Create administrative liaison clinical personnel to publish information about KMC in print and electronic media (PI 35; TQMe 1, 4).</p> <p>3.2.3 Organise mothers who have practiced KMC successfully into a body and use them as mentors to upscale uptake (PI 13, 14, 15, 16, 18, 19, 20, 35; TQMe 1, 2, 3, 4).</p> <p>3.3. Create inter professional teams (to include doctors, community health workers) and multi sectoral collaboration (Health, Agriculture, Gender, and relevant developmental partners). (P1 14, 16,17,20,26,27,30,40,41,42:TQMe 1,2,3,4)</p>	<p>At least monthly visit by a facilitator from the in-service education unit of the tertiary health facility to provide on- the-spot assistance to nurses and mothers of preterm babies at the private/public, tertiary /secondary, PHCs /unit who need help with facilitation</p> <p>Encourage and assist mothers of preterm babies to form a group known as “born-too-soon mums” to attend presentations held by nurses and share their experiences quarterly.</p> <p>Interdisciplinary and sectorial teams comprised of doctors, community health workers) and multi sectoral collaboration (Health, Agriculture, Gender, and relevant developmental partners) to collaborate and form a cohesive force and develop a holistic approach to improve maternal and neonatal health. At least bi-annual meetings to discuss challenges and progress. Team to be chaired by the minister for health.</p>
<p>4. To improve infrastructural development for both staff and parents of preterm infants in private/public, tertiary/secondary/PHC/units in Edo State, Nigeria.</p>	<p>4.1 Draw the government and public awareness to shortage of infrastructure and need for more neonatal care centres in the state through management and position paper highlighting absenteeism probably due to overwork by nursing organisation and staff welfare association.P1,3,5;6;17; TQMe 1, 2, 4).</p>	<p>Develop position paper to paper to highlight international standard of best practice of nurse/patient ratio.</p> <p>Use key nurse members and persons sympathetic to nursing issues to reach the legislative bodies to enable increase in annual health budget health.</p>

	Equipping a different room in the hospital to provide privacy for the mothers of preterm/LBW babies (P1,18, 38,40; TQMe 1,3)	Communities to agitate and request for more health facilities from the government by first making land available to encourage government.
5. To reduce the effect of socio-cultural practices on KMC through the optimisation of the information dissemination system to all health facilities; private/public, tertiary/secondary/PHCs/unit s in Edo State, Nigeria	<p>5.1 Reduce misconceptions and create awareness of KMC in the communities through gatekeepers (P23, 38, 40, 43; TQMe 2, 5).</p> <p>5.2. Develop and implement best practices for expanding the current and future pool of OHW in clinical practice (PI 9, 10, 11, 13; TQMe 1, 3).</p> <p>5.2.1 Market KMC as a preferred mother-child care practice and highlight the attractiveness of a career in neonatal nursing and research, to recruit more nurses to the clinical areas (PI 3, 5, 12.13, 14, 27, 33; TQMe 2, 3).</p> <p>5.2.2 Advocate for the setting up of more KMC-dedicated facilities in the Edo State through professional bodies (NANNM) and other legislative lobbying for improved funding of neonatal care (PI 23, 30, 31, 33, 36, 37; TQMe 1, 3, 6).</p>	<p>Invite women leaders, chiefs and other community gatekeepers to seminars and workshops on KMC quarterly; and the annual KMC days annually.</p> <p>Use of radio and TV jingles and play to showcase the positive effect of KMC.</p> <p>Use of ICT to enhance communication in the health sector e.g. e-mails, SMS Skype, WhatsApp group chats etc. as frequently as possible – weekly.</p> <p>Tertiary hospitals to serve as staff and information pull for KMC.</p> <p>Leadership and KMC training programmes to be organised and taken to the doorstep of the secondary and PHCs facilities bi-annually.</p> <p>Local community chiefs and women leaders to be invited to workshops and seminars on KMC bi-annually and use such forum to correct misconceptions.</p>
6. To establish an enabling working environment that focuses on the needs of the OHW and parents of preterm babies in healthcare facilities; private/public, tertiary/secondary/PHC/units in Edo State, Nigeria	<p>6.1. Fast-track post-basic nursing by building bridges between general nursing, midwifery and degree in nursing (PI 3, 27, 28, 30, 31; TQMe 2, 4).</p> <p>6.2 Create an administrative KMC coordinator to ensure that all administrative processes with regard to KMC facilitation (e.g. yearly neonatal births, neonatal mortality, yearly number of neonates who received KMC, other) are conducted and regular statistics is made available to end</p>	<p>Set meeting days to discuss empowerment of nurses on KMC in health facilities and not limit such meetings to the tertiary health care facilities alone (take such meetings to the doorstep of all units, PHCs, secondary, private facilities at least quarterly).</p> <p>Create and train KMC administrators/facilitators for each of the three senatorial districts to monitor the</p>

	users e.g. to OHWs, CMD and policy makers (PI 11, 14, 15; TQMe 1, 4, 5).	attendant PHCs in the districts at least bi-monthly for empowerment and encourage nurses and mothers on KMC.
	<p>6.3 Create positive work environments for OHW at health facilities/tertiary/secondary/PHCs/units (PI 4, 6, 7; TQMe 1, 4).</p> <p>6.3.1 Evaluate job satisfaction of OHW and develop strategies to improve the work environment (PI 4, 6, 7; TQMe 1, 4).</p> <p>6.3.2 Develop supervision and mentorship capacity among clinical personnel (PI 10, 11; TQMe; 1, 2, 4).</p> <p>6.3.3. Display the approved KMC protocol in conspicuous areas accessible to all staff and parents of preterm infants (PI 11, 3, 34; TQMe 2, 4, 5).</p> <p>6.4 Orientate and introduce newly admitted mothers of preterm babies to mothers who have successfully benefitted from KMC.</p> <p>6.4.1 Orientate newly employed staff to the work/hospital environs and support structures such as staff clinics, staff schools for children. Study day and in-service programmes, (PI 1, 4, 6; TQMe 1, 4).</p> <p>6.5 Provide a well-equipped and dedicated room for KMC facilitation (PI 21, 22, 29; TQMe 1, 4).</p> <p>6.5.1 Provide well-furnished and equipped in-dwelling rooms for mothers of preterm babies (PI 21, 22, 29; TQMe 21, 22, 29).</p>	<p>At least <i>monthly visit</i> by a facilitator from the in-service education unit of the tertiary health facility to provide on-the-spot assistance to nurses and mothers of preterm babies at the secondary, PHCs/units who need help with facilitation.</p> <p>The servicom facility already in place in the tertiary health facility which enables patients to report complaints about staff to be extended to staff to as an avenue to anonymously complain and report improper treatment and uncooperative stance by managers <i>daily</i>.</p> <p>Do a guided and familiarisation tour of facilities and orientation of mothers during ANC <i>at least once</i> before 28 weeks gestation; newly admitted mothers of preterm babies to be introduced mother to other mothers practicing KMC <i>within 6 hours</i> of admission to reduce psychological trauma.</p> <p>Leadership training and delegation of duties with corresponding authority to enable skill development within <i>12months</i> of working in the NICU.</p>

## **6.2 SECTION TWO: APPLICATION OF THE DELPHI PROCESS**

### **6.2.1 CHAPTER OVERVIEW**

This section explains the application of the Delphi process to the study. The primitive or draft strategies developed by the researcher from the 43 conclusion statements derived from the problems identified in the phase one were inductively and deductively transformed into performance objectives alongside the total quality management technique of Pearce and Robinson (2000). This section aimed at explaining how the Delphi technique was applied to the study to develop an acceptable document for use in all health care facilities in Edo State.

### **6.2.2 THE DELPHI TECHNIQUE**

This study employed the conventional or classic Delphi technique because the researcher is of the opinion that having a physical meeting contradicts one of the basic rules of the classical Delphi procedure, which is avoidance of situations that might allow one of the panel members to dominate the consensus process. Similarly, some other advantages inherent in this technique is the anonymity of panelists which enhances the probability that opinions are considered in and of themselves without being influenced by the person who expressed the opinions (Skulmoski et al., 2007). Furthermore, the development of strategies that would be acceptable and feasible for use in all health facilities in Edo State is considered as a project that ought to be thoughtfully handled by experienced persons in order to add to the credibility of the study and therefore the outcome. A consensus was assumed in this study by a 75% agreement obtained from the results of the questionnaire presented.

Based on this premise, the researcher was armed with foreknowledge of the possible hindrances to the Delphi technique. Some of the steps recommended to mediate by Somerville (2008) were initiated and followed in the study as stated below:

- ❖ Persons who have time and are willing to be part of the study were selected.
- ❖ Participants were allowed to choose the best possible method to receive questionnaire.
- ❖ Communications to the panelists were clear about the extent of their expected involvement.
- ❖ Speedy feedback of the results of each round was provided.
- ❖ Encouraged non-responders to respond through systematic follow-up and by regular telephone calls to remind them of the task.

### **6.2.3 THE DELPHI RESEARCH APPROACH**

The research approach of the Delphi method employed in this study was quantitative. This approach is common to the classic or basic Delphi as highlighted previously (De Villiers et al., 2005). (See paragraph 2.18). It employs the use of self-administered questionnaire to experts without any physical contact with each other.

#### **6.2.3.1 Aim of the Delphi Process**

The aim of the Delphi process was to ensure quality, acceptability and feasibility of the draft strategic document developed by the researcher by refining it.

### **6.3 SAMPLING AND STUDY POPULATION**

Choosing experts in a Delphi process is the key to its success as this is generally perceived as setting it apart from other methods of study (De Villiers et al., 2005; McKenna, 1994). The purposive sampling technique was therefore applied to achieve this aim because it helps the researcher to select participants that can provide rich information. Literature reports that

individuals in a Delphi method should be identified and ranked according to disciplines or skills, government official, academic or non-governmental persons (Okoli & Pawlowski, 2004).

***Selection Criterion: (Inclusion)***

Panelist who possessed the below mentioned criteria were selected for the process:

- ❖ Management staff with work experience of more than 10 years.
- ❖ Head of unit or consultant in own area of expertise as determined by position held previously and at present.
- ❖ Those who have the time and are willing to take part in the study.
- ❖ Those in any managerial or decision-making position.
- ❖ An operational health worker in the neonatal unit with more than 5 years working experience.
- ❖ A woman whose child had been admitted previously in the NICU and had participated in phase one interview data collection process.

***The exclusion criteria:*** those who do not fit into any of the above criteria.



**Table 6.3: Affiliation of the Panelists**

No	Discipline	Skill	Organization
2	Medicine practitioner	Neonatology/Child health.	Tertiary health institution.
1	Medical practitioner	Obstetrics and Gynaecology	Tertiary health institution
1	Chief Medical Director	Administration.	Tertiary health institution
1	Assistant Director of Nursing Services	Nursing Administration.	Tertiary health institution
1	ADNS NICU	Neonatal Nursing /Management.	Tertiary health institution
1	ADNS: Public Health unit	Public Health Management.	Tertiary health institution.
1	Operational health worker in the NICU	Facilitation of KMC.	Tertiary health institution.
1	Nurse faculty	Curriculum and training.	Tertiary health institution.
1	Mother of a preterm infant.	Experiences in KMC.	Tertiary health institution: Mother of preterm infant admitted in the institution as patient.
1	State Director of Nursing Services	Administration	Public servant
TOTAL =11			

## 6.4 DATA COLLECTION TOOL

As with basic Delphi, a self-administered questionnaire was used for data collection. The process of the development and application of the questionnaire is briefly explained in the following segment.

### 6.4.1 Developing the Questionnaire

A summary of concluding statements from the 43 problems identified in phase one by the researcher lead to development of six objectives through inductive and deductive logical reasoning (See paragraph 6.2.3 and attached draft objectives, functional and tactical actions). These were translated into aims and performance objectives backed by the six TQMe principles that served as a framework to guide the development of the strategies.

## **Aim**

- ❖ To develop strategies to enhance early implementation of KMC guidelines in health facilities in Edo State, Nigeria.

## **Objectives**

- ❖ To improve the KMC knowledge, attitude and practice operational health workers in all health care facilities: private/public, tertiary/2<sup>nd</sup>/PHC/units in Edo State, Nigeria.
- ❖ To negotiate improvement in human resource base for nursing practice especially neonatal trained nurses in health care facilities private/public, tertiary/2<sup>nd</sup>/PHC/units in Edo State, Nigeria.
- ❖ To improve neonatal services through staff development in an all-inclusive environment of decision making in health care facilities private/public, tertiary/2<sup>nd</sup>/PHC/units in Edo State, Nigeria.
- ❖ To improve infrastructural development for both staff and parents of preterm infants in private/public, tertiary/2<sup>nd</sup>/PHC/units in Edo State, Nigeria.
- ❖ To reduce the effect of socio-cultural practices on KMC through the optimisation of the information dissemination system to all health facilities; private/public, tertiary/2<sup>nd</sup>/PHCs/units in Edo State, Nigeria.
- ❖ To establish an enabling working environment that focuses on the needs of the OHW and parents of preterm babies in healthcare facilities; private/public, tertiary/2<sup>nd</sup>/PHC/units in Edo State, Nigeria.

Performance objectives were stated in the form of tactical actions and expected outcomes for interventions to achieve the strategy's adoption, implementation and sustainability. The

acceptance of the objectives was decided based on 75% consensus agreement by the Delphi experts and panelists who tested the authenticity/feasibility/relevance of the strategy. This process was embarked upon to refine the strategy to meet objective 8 of this study: Developing strategies to enhance the implementation of early KMC guidelines in health facilities in Edo State, Nigeria.

The first draft of the intervention strategies was developed by the researcher based on the identified results and concluding statements as highlighted in paragraph 6.2.3. A 65 item questionnaire was developed from the performance objectives of the TQM philosophy. The vision and mission statements for the operational health workers, administrators and parents of preterm/LBW infants were developed from the stated vision and mission statements of the Federal Ministry of Health, the University of Benin Teaching Hospital, and the National Association of Nigeria Nurses and Midwives. Inductive and deductive reasoning were used to develop performance objectives from the problems identified and concluding statements derived from the data analysis in phase one. This enabled aims and objectives to be created. The formulation of the aims and objectives, based on the problems identified in phase one, laid the foundation stone of the questions that were posed in the questionnaire to the panelists.

The initial questionnaire was divided into two documents. The first document contained the draft overview of the research problem and its findings; the draft strategies based on deductive and inductive logic and the TQMe performance objectives were explained to enable an informed input by the Delphi panelists.

The second document was in two sections. Section “A” asked questions about panelists’ demography such as age, area of specialisation and work experience. Section “B” asked panelists’ input to the developed strategy in a quantitative and open-ended question format. Panelists were asked to comment on the draft strategies in terms of its applicability, feasibility, acceptability and measurability. The questionnaire concluded each section by asking the panelists to succinctly make contributions to any areas or state reasons for their ratings. This served as baseline for the next phase that was formulated in the form of close-ended questions by a Likert scale of 5 and its ratings. E.g. 5= strongly agreed, 4 = agree, 3= strongly disagree, 2= disagree and 1= Neutral.

#### **6.4.2 Pilot Study**

After drafting the questionnaire, it was given to three independent health workers that were not part of the study. One of them was a nurse/midwife in the antenatal clinic, the other in the paediatric ward while the third was a senior consultant in child health. Their contributions were on the aspect of the voluminous nature of the 25-page draft document and the technical nature of framing the questions. They suggested the document be explained in simple language irrespective of whether the panelists are health/medical personnel. Their input was utilised in the final draft to refine and revise the questionnaire.

### **6.5 RELIABILITY AND VALIDITY**

Extensive literature search and the problems identified in phase one, as well as the expert scrutiny by the project supervisor and the statistician served as instrument validity method. Furthermore, the Cronbach Alpha was applied to calculate the reliability of the questionnaire from the pilot test. This yielded the following results as presented in table 6.5.

**Table 6.5: Cronbach Alpha Reliability of Delphi Questionnaire**

Phase Two	Delphi Questionnaire		
	Section: A	NA	NA
	Section: B	Mission Statement	.838
		Vision Statement	.889
		Principle	.982
		Value	.938
		Objective 1	.667
		Objective 2	.761
		Objective 3	.821
		Objective 4	.857
	Objective 5	.923	

A validity of more than 0.75 is regarded as high and appropriate as seen in the table which has the entire questions domain scoring above 0.5. The feasibility of the process improved reliability as the experts and panelists were contacted and their willingness to serve on the panel were ascertained before the actual exercise.

## **6.6 DATA COLLECTION PROCESS**

The data collection process of the Delphi method was determined by the feasibility of the study and the best way previously agreed on by the panelists. The addresses and contact details of the panelists such as their e-mails, cell phone numbers and official physical contact addresses were obtained. Their availability and willingness to serve on the panel was previously ascertained and an information sheet and consent form were administered prior to the commencement of the study.

The panelists were also made to indicate the best or preferred method to receive their questionnaire which facilitated the process and reduced dropout rates. The questionnaire in this study were both hand delivered and forwarded via e-mail because two of the panelist

requested to have their questions sent to their mail boxes to save the researcher the pains of trying to track them. It is instructive to mention here that the preterm mother chosen for this study was literate as she was a teacher with a National Certificate in Education. The researcher did not encounter any problems in terms of her understanding her role and requirements for participation in the study. Panelists were given a maximum of two weeks to respond to the questionnaire.

In instances of lack of immediate response, follow-up phone calls were made to the panelists to remind them of the task ahead. The researcher personally delivered the questionnaire by hand in sealed envelopes with the consent form and information sheet to all the respondents, except to the two members as explained previously.

❖ **Response Rate:** As is common in Delphi studies that records high attrition rate, there was only one panelist out of the initial eleven who could not serve on the panel as planned (Mikton, Tanaka, Strainer, Tonmyr, X Lee & Fisher et al., 2017). This was the Chief Medical Director of the hospital who completed his tenure and was replaced. The successor was too busy with this type of task so was the Deputy Chief Medical Administrative (DCMAC) who though was delegated by the new Chief Medical Director, did not respond to his emails, phone calls or text messages after the first meeting with the researcher. The response rate was thus 91%.

## **6.7 THE DELPHI PROCESS**

The process of this phase continued by sending an initial draft copy of a detailed description of the research problem that informed the study and consequently the study vision, mission,

value statement and principles developed for the OHW. The problem identified and concluding statements of the empirical research and the consequent objectives and functional actions and tactics developed inductively/deductively, with the TQM philosophy were explained in details to enable the understanding of the panelists and their part of the study. Furthermore, it enabled the panelists to make informed judgment and suggestions which enriched the study.

The questionnaire required both quantitative and qualitative inputs and suggestions to the first draft. Thereafter a quantitative approach was employed on the subsequent questionnaires which built on the responses to the first. As indicated earlier, a consensus was determined by 75% agreement of the responses after data analysis. Refer to chapter 3; paragraph 3.6.9 on the steps involved in Delphi technique as discussed earlier.

### **6.7.1 Data Collection Process**

Data collection method in a Delphi technique is called rounds (Hasson & Keeney, 2011). In this section of study, data collection happened in three rounds beginning from round one.

**Round 1:** This process began with a quantitative and an open-ended questionnaire which served as the cornerstone of soliciting specific information from the experts/panelists. Their input and opinions were sought regarding the authenticity, applicability and measurability of the objectives and action plans for KMC implementation with a sixty-five (65) item close-ended and open-ended questionnaire.

Data from the first round were analysed using SPSS (24) while the qualitative responses was arranged according to the themes that arose from each panelist's recommendations and classified quantitatively for content analysis techniques (Hasson & Keeney, 2011). Where

several different terms were used for what appears to be the same issue, the researcher grouped them together to provide one universal description. These descriptions and grouping systems need to be verified to ensure that the data were fairly represented. No items were added during analysis and the wording used by participants, with minor editing, were also used as much as possible in listing items for round two stating their own positions and the position of others.

The quantitative analysis allowed for median and mode answers to be discovered. First round consensus was defined as 75% or more of the respondents being in agreement with a statement. This is line with a study of Delphi technique employed to assist with making recommendations regarding education and training for medical practitioners working in district hospitals in South Africa that have used the same percentage (De Villiers et al., 2005).

**Round 2:** This was the second phase of data collection in which only the Delphi participants whose responses did not meet the predetermined acceptance criteria of 75% received a second questionnaire (appendix 8) for review where the list for the items, their ratings, minority opinions, and items which achieved consensus were distributed to the panelists and were asked to review the items summarised by the researcher based on the information provided in the first round. Ascertaining the level of collective opinion was determined with the use of descriptive and inferential statistics. The data from the ratings of the items to be analysed were obtained by producing statistical summaries for each item. Central tendencies (means, medians and mode) and levels of dispersion (standard deviation and the inter-quartile range) were computed to provide participants with information about collected opinions. This enabled participants to see where their response stands in relation to that of the group.



**Round 3:** This was the final round where all the items which achieved consensus were distributed to the panelists (evidence). This round provided a final opportunity for participants to revise their judgments. A consensus agreement of 75% formed the basis for acceptance of the opinion of the panelists as none of the panelists reviewed their responses further (McKenna, 1994).

## **6.8 RESULTS AND INTERPRETATION OF FINDINGS**

### **6.8.1 Overview of the section**

This section presents the result and interpretation of each round of the Delphi questionnaires. It commences with the returned number of questionnaire and the panelists' rating of the domains in the questions presented.

### **6.8.2 Result and Interpretation of Round One**

The questionnaire from the panelists were first given a code number for ease of identification before entry into the Microsoft Excel for analysis by means of the SPSS (version 24). This was done to double check and to avoid errors. Where discrepancies were noted, the original questionnaire was traced by means of its unique identification number and the data entry item corrected accordingly. Descriptive statistics was used to describe and synthesize data and reported in measures of central tendencies e.g. frequencies (f), median and mode (Brink, Van Der Walt, & Van Rensburg, 2010). Content analysis was employed on the qualitative aspect to discover categories and themes that arose from each document.

The data was interpreted through descriptive analysis by an initial conversion of the scores into percentages. To compute percentage score for each respondent in a domain, the

calculated total score obtained by respondents in that domain was done; the score was divided by the total score expected in that domain, as expressed mathematically below:

$$\% \text{ Score} = \frac{\text{total score obtained by respondents}}{\text{total score expected}}$$

E.g. for the vision statement, the total score expected is 7 items multiplied by the highest point on the Likert scale (4) = 7 x 4 = 28. Domains without comments were not included but only those whose score were below 75% consensus by panelists are revised based on suggestions and a second questionnaire sent to concerned individual for reassessment.

Eleven questionnaires were distributed with ten duly completed and returned, giving a response rate of 91%.

## 6.9 DEMOGRAPHY OF PANELISTS

**Table 6.9: Demography of Delphi Panelists**

Area of specialty	F (%)	Gender	F (%)	Designation	F (%)	Working Experience	F (%)
Paediatrics	1 (10)	Male	1 (10)	Consultant	1(10)	Below 10 years	1 (10)
O&G	1 (10)	Male	1(10)	Consultant	2 (20)	10 - 19 years	2 (20)
Nursing Admin	1 (10)	Female	1 (10)	Deputy Director of Nursing	1 (10)	Above 10 years	1(10)
Neonatal Nursing	1 (10)	Female	1 (10)	ADNS& Sectional Head	2(20)	20 - 29 years	2 (20)
Public Health Management	1 (10)	Female	1 (10)	ADNS& Sectional Head	1(10)	30 years and above	2 (20)
OHW	2 (20)	Female		SNO; PNO	2(20)	Above 6 months	
Mother (of preterm baby)	1(10)	Female	1 (10)	Secondary School teacher	1(10)	Not relevant	
Faculty (Lecturer)	1 (10)	Female	1 (10)	Lecturer I	1(10)	Above 2yrs in Pediatric specialty	1 (10)
Other	1(10)	Female	1 (10)	Director of Nursing Services (DNS).Edo State	1(10)	Above 2years administrative experience	1 (10)

The affiliation of the panelists is explained in table 6.9. Only 2 (20%) are males while the remaining 8 (80%) are females. Their designation is displayed in the table; 2 (20%) has work experience of below 10 years, 2 (20%) work experience of 10-19 years, while 4 (40%) has work experience of between 20-29 years. The remaining 3 (30%) have worked for more than 30 years.

### 6.9.1 RATINGS AND SCORES

Table 6.9.1: Panelists Scores on Each domain of Questionnaire

CODE	P_1	P_2	P_3	P_4	P_5	P_6	P_7	P_8	P_9	P_10
Mission statement	64	29	89	93	82	64	61	86	71	71
Vision statement	78	75	88	94	100	75	94	100	69	69
Principles	50	25	94	100	100	75	75	100	75	63
Value statement	60	25	90	100	100	75	100	100	80	95
Objective 1	75	75	88	81	100	75	88	75	56	88
Objective 2	56	50	88	100	75	75	63	100	69	100
Objective 3	75	50	94	94	69	75	69	100	69	100
Objective 4	69	56	94	94	56	75	69	100	69	100
Objective 5	69	63	94	94	75	75	94	100	69	100

The ratings of panelists on the vision, mission, values and principles, as well as the objectives and tactical plans of the strategy are displayed in table 6.2.10. It indicates that three panelists scored all the items above 75% (P\_3, 4 and 8), as highlighted.

**Table 6.9.2 Measures of Central Tendencies**

Variable	Mean	Std. Deviation	Median	Minimum	Maximum	Range	Variance
<b>Vision Statement</b>	83.75	12.57	81.25	68.75	100	31.25	157.99
<b>Mission Statement</b>	71.07	18.71	71.43	28.57	92.86	64.29	349.92
<b>Value Statement</b>	82.5	24.3	92.5	25	100	75	590.28
<b>Principles</b>	75.63	24.73	75	25	100	75	611.55
<b>Objective 1</b>	80	11.71	78.13	56.25	100	43.75	137.15
<b>Objective 2</b>	77.5	18.68	75	50	100	50	348.96
<b>Objective 3</b>	76.88	22.45	75	25	100	75	503.91
<b>Objective 4</b>	78.13	17.24	71.88	56.25	100	43.75	297.31
<b>Objective 5</b>	83.13	14.45	84.38	62.5	100	37.5	208.77

Table 6.9.2 indicates that the mean score by the panelists on the vision statement was 83.75%, the median 68.75%, and the maximum 100% with a SD of 12,57. The mission statement has a mean score of 71.07%, a median score of 71.43%, and minimum score of 28.57%, maximum, 92.86% and an SD of 18.71 while the range was 64.29. The value statement and principles had a minimum score 25% each, but a maximum score assigned were 100%. The interpretation of the table can thus be seen at a glance as described.

## 6.10 RESULT OF ROUND 2

The table 6.10: Result from round 2

	Mission Statement	Vision Statement	Value statement	Principles	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5
P_1	96.43	--	100.00	87.50	--	93.75	--	93.75	100.00
P_2	85.71	--	95.00	100.00	--	93.75	80.00	87.50	93.75
P_5	--	--	--	--	--	--	95.00	93.75	--
P_6	96.43	--	--	--	--	--	--	--	--
P_7	96.43	--	--	--	--	93.75	95.00	93.75	--
P_9	75.00	--	--	--	75.00	75.00	75.00	75.00	75.00
P_10	85.71	93.75	--	93.75	--	--	--	--	--
Total	89.29	93.75	97.50	93.75	75.00	89.06	86.25	88.75	89.58

Table 6.10 highlights the results of the second questionnaire sent to the panelists. This round entailed sending a questionnaire which weighted panelists' position against the other respondents. The results of the seven participants that scored 75% in some domains are displayed below. The table shows that all participants scored each variable above 75%. The phase 2 results showed their position or score against the other participants' score.

### 6.11 RESULT OF ROUND 3

**Table 6.11: Results of Round 3**

CODE	P_1	P_2	P_3	P_4	P_5	P_6	P_7	P_8	P_9	P_10
Vision statement: To provide kangaroo care to preterm infants through facilitation by their parents that will enable transformation of skills in neonatal care through excellence in nursing practice to reduce neonatal mortality globally	78	75	88	94	100	75	94	100	75	89
Mission statement: To reduce neonatal mortality rate through effective, efficient and dynamic global nursing practice by the operational health workers, the administrators, parents of preterm infants and the general public.	96	86	89	93	82	96	96	86	75	94
Value statement: i.) Maintenance of professional ethics  ii.) Cultural sensitivity to gender, shared responsibility and commitment to international best practices for health.	100	95	90	100	100	75	100	100	80	98

Principles: i) To provide sustainable evidence based, responsive, gender sensitive and pro-poor health care to the preterm infants.  ii) To facilitate and encourage kangaroo care by parents with a focus on good outcome	88	100	94	100	100	75	75	100	75	94
Objective 1	75	94	88	81	100	75	88	75	75	75
Objective 2	94	93	88	100	75	75	94	100	75	89
Objective 3	75	80	94	94	95	75	95	100	75	86
Objective 4	94	87	94	94	94	75	94	100	75	89
Objective 5	100	97	94	94	75	75	94	100	75	89

The last round (3) of the questionnaire result is depicted in table 6.11 above. It involved compiling the scores of the all the participants against their identities and sending it to them for acceptance and final review. Since no further changes were made, the vision, mission, value statement, principles and objectives are regarded as authentic, applicable, verifiable and measurable therefore, and no further analysis was done. The results were accepted to enable the strategy development of early KMC implementation guidelines in healthcare facilities in Edo State, Nigeria.

## **6.12 IMPLEMENTATION OF STRATEGIES TO ENHANCE EARLY IMPLEMENTATION OF KMC GUIDELINES IN HEALTH FACILITIES IN EDO STATE, NIGERIA**

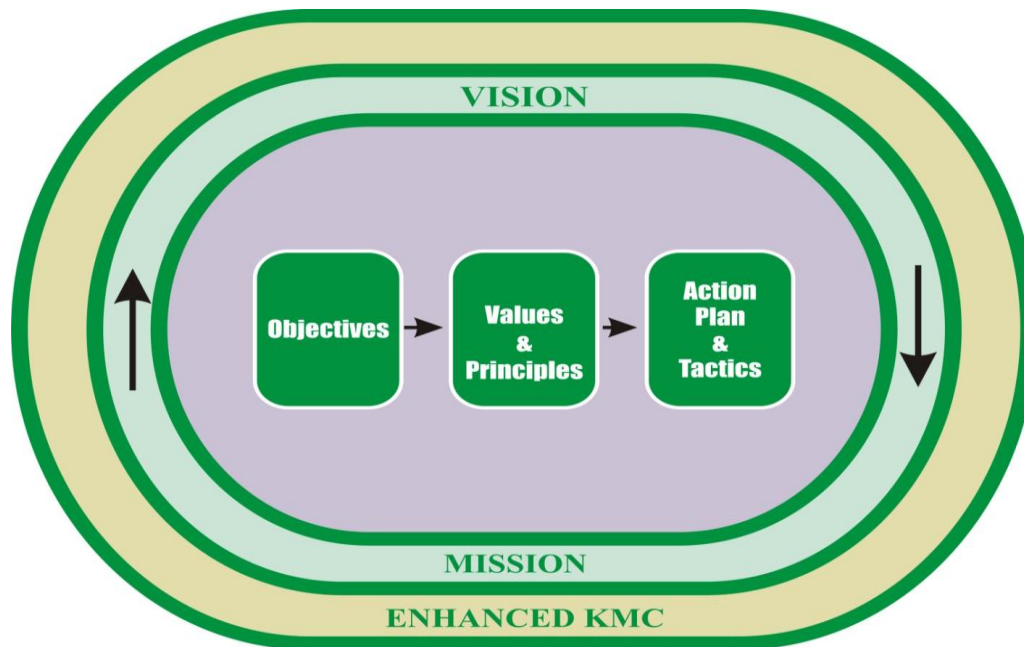
As stated at the beginning of this chapter, this is the third and last segment in the strategic development process of a KMC document that will enhance early implementation of its guidelines in health facilities in Edo State that is graphically presented in Figure 6.12. The implementation of the strategy to enhance early implementation of its guidelines in healthcare can be described as:

The vision of the operational health workers, the administrators and parents of preterm infants which is : to provide kangaroo care to preterm infants through facilitation by their parents that will enable transformation of skills in neonatal care through excellence in nursing practice to reduce neonatal mortality globally” gives rise to the mission of neonatal nursing.

The mission of KMC is to “reduce neonatal mortality rate through effective, efficient and dynamic global nursing practice by the operational health workers, the administrators, parents of preterm infants and the general public”

The vision and mission are driven by the values at grassroots and universal coverage, equity, development, efficiency and effectiveness as well as and public accountability. This make room for collaboration, excellence, innovation, integrity and respect for both customers and care givers based on the principles of equity, development, quality, effectiveness and efficiency and institutional autonomy and public accountability.

The strategy to enhance early implementation of its guidelines in healthcare facilities in Edo State Nigeria is based on the TQM philosophy. TQM is based on three fundamental principles that encompass its overall concept and, if they are efficiently administered, will promote the continuous improvement of an organisation. The three fundamental principles of TQM are: focus on the customers, internal and external; process improvement and total involvement along with six supporting elements namely: leadership, communication, teamwork, continuous improvement, employee involvement education and training.



**Figure 6.12 Model of the strategy**

The strategic objectives are determined in line with the vision, mission, values, principles and assumptions of the strategy and the philosophy of TQM, and from the problems identified that threaten the implementation of KMC. These problems were identified by the health policy analysis triangle to explore the actors, content, context and process with regard to the knowledge, attitude and practice in in order to identify problems with regard to KMC implementation in healthcare provision. The functional tactics were developed from the strategic objectives in order to enable operationalisation and implementation of the strategic objectives, as well as to ensure that strategic objectives can be measured and evaluated.

**THE STRATEGIC DOCUMENT:** The developed strategic document for the early implementation of KMC guidelines for use in any health care facility in Edo State, Nigeria is attached as appendix 16.



## **6.13 INTERGRATION OF CONCEPTUAL AND THEORETICAL FRAMEWORK TO THE STUDY**

This section discusses how the conceptual and theoretical frame works fitted with the study.

The study was in two phases that entailed two different approaches to investigate the variables under study.

The first phase: the problem identification phase employed a conceptual frame work that addressed the actors by the application of the health policy analysis triangle (Walt & Gilson, 1994). The theoretical framework in phase 2 was based on the Total Quality Management elements (TQMe) of Pearce and Robinson (2000).

A multi method of quantitative and qualitative approaches was thus used concurrently to explore the actors in the study OHWs, administrators and mothers of preterm babies. The outcome of this phase resulted in conclusion statements which were consequently inductively and deductively formulated into action plans and tactics that formed the basis for the TQM philosophy by adopting the strategic planning process of Bryson (1998), as previously highlighted (paragraph 6.1.1).

### **❖ Phase 1: The Health Policy Analysis Triangle**

The status of KMC practice in health facilities in Edo State, Nigeria was investigated using the health policy analysis triangle of Walt and Gilson (1994). This triangle is based on four independent and interrelated factors namely actors, context, process and content which are considered important to understanding policy process. It was used as a conceptual frame work to develop the objectives 1-7 of the study which explored knowledge, attitude and current practices of KMC by health workers, managers and mothers (refer figure 2.8).

The model assumes that health policies are not about prescriptions or descriptions made in a social vacuum; rather policies are implemented if the implementers are involved in its development. The OHWs, administrators and mothers of preterm and LBW babies are the actors or implementers of KMC in this study. The context addresses issues which are unique to Nigeria as a country, and Edo State in particular. This is one of the 36 states in Nigeria located in the south-south (SS) zone with its capital in Benin City and is referred to as one of the ancient cities of the world with its rich cultural heritage (The Guardian, 2016). This is where the study site is located. The content of the document under consideration was the KMC guideline as recommended by WHO (2003). The awareness and modalities of implementation of these guidelines by the OHWs and administrators were ascertained in this study.

In order to understand the knowledge, attitude, practice and challenges of the drivers of KMC, it was important to highlight the roles played by the actors in relation to the concept and content of KMC using the health policy analysis triangle. The OHWs and administrators were investigated to understand what and how they have been doing in respect to KMC practice; the challenges they are experiencing and their suggestions on how to resolve the identified challenges. On other hand, the mothers of preterm and LBW babies were investigated to determine how socio-cultural practices affect KMC uptake. The content of the policy dealt with the knowledge the actors currently possess regarding KMC guidelines and its application, as well as challenges encountered. The context dealt with issues of attitude, while the process investigated the knowledge, attitude and practice of KMC, as well as challenges experienced by the actors.

Forty-three conclusion statements were made based on identified problems by the OHWs, the administrators and mothers of preterm /LBW babies. These findings confirm that the concept of the framework is correct and indicates that before any policy is made, the actors or implementers ought to be involved from conceptualization to the implementation phase. The actors ought to be aware of the content of the KMC policy guideline which was not made available nor were they part of its development, though the development phase of the policy was left out in this study because the document in question was from WHO (2003).

#### ❖ Phase 2: Total Quality Management

The 43 conclusion statements were formulated from the empirical research which formed the evidence base for the development of the strategies. The application of Bryson's (1988) strategic development process was then adopted to develop a vision and mission statement, identify values, principles and assumptions. Strategic objectives and functional tactics were formulated based on the Total Quality Management (TQM) philosophy of Tenner & DeTorro (1992).

TQM is based on three fundamental principles that focuses on the customers, internal and external; process improvement and total involvement. While it's supporting elements as applied in this study were: leadership, communication, teamwork, continuous improvement, employee involvement education and training. Solutions to problem identified where based on the six TQMe elements as listed above. Implementation of the strategy objectives and its functional tactics and action plan were measured and evaluated for its acceptability, authenticity through the Delphi process.

For a policy to be well-implemented, actors ought to have knowledge. The gaps identified confirms that there is a need to have a strategy in place to enable health workers in neonatal care get involved in KMC practice. These findings have resulted in production of a strategic document that addresses all key issues concerning actors, context, content and process as set out in this study, thus justifying the use of the conceptual and theoretical frameworks.

#### **6.14 SUMMARY**

In this chapter, the process of the development of strategy to enhance early implementation of KMC guidelines in health facilities in Edo State, Nigeria was discussed in accordance to the strategic process. The strategic process was discussed with regard to the vision, mission, values, principles, assumptions, strategy objectives and functional tactics formulated by the researcher. Findings were based on problems identified from the empirical research and the TQM philosophy through the application of the inductive and deductive logic. The integration of the conceptual and theoretical frameworks in the study was highlighted to show how it fits into the study and thus emphasised the value of a strategy to address issues raised in the study.

The chapter further portrayed the role of the Delphi process as a method of quality assurance for the strategy developed to guarantee its acceptability, usability and measurability. The chapter concluded with a visual portrayal and discussions of the implementation of the strategy to enhance early implementation of KMC in health care facilities in Edo State, Nigeria. The strategic document developed is presented in appendix 16. It is believed that the application of the strategy will lead to early implementation of KMC guidelines in health facilities in Edo State, Nigeria and thus reduce neonatal mortality rate. See appendix 16 for developed strategic document.

**CHAPTER SEVEN**  
**EVALUATION OF THE STUDY, LIMITATIONS, REFLECTIONS AND**  
**RECOMMENDATIONS FOR FURTHER STUDIES**

**7.1 OVERVIEW OF THE CHAPTER**

In the previous chapters, the research methodology, the research findings and the strategy formulation process were discussed. Conclusions were arrived at in line with the set objectives which were systematically attended to until it culminated into the formulation of a strategy for the early implementation of KMC guidelines; which is the hallmark of this study. A few challenges were encountered in the course of the study which resulted in limitations to what could have been achieved. This chapter will therefore discuss the limitations of the study and espouse the researcher's reflections on the whole process, as well as make recommendations for further studies.

**7.2 EVALUATION OF THE STUDY**

The study aimed at developing strategies to enhance the early implementation of KMC guidelines in healthcare facilities in Edo State, Nigeria. The researcher functions within the pragmatist paradigm where she believes that the world is an ever-changing place; reality is what is actually experienced. It is oriented 'towards solving practical problems in the real sense of the issues at hand. The researcher clearly outlined the research questions and objectives of the study that pointed towards the aim, as the findings of the study were to be the basis upon which the strategies were to be formulated. Based on this, in the evaluation of the study, one also need to ask if the questions were answered and the objectives were met. The conceptual frame employed in this study was the health policy analysis triangle of Walt and Gilson (1994) which served as a tool to explore the key actors (operational health workers, administrators and parents of preterm infants) in terms of the KMC content, context

and process. This served to explore the actors' current knowledge, the way they practice and the challenges encountered as this framework was thus used to develop the questionnaire based on the objectives.

The first objective was to describe the knowledge, attitude and practice of OHWs in Edo State, Nigeria regarding KMC guidelines. Self-administered questionnaires were distributed to the OHWs in order to gather information from them in this regard. The focus was on the knowledge of KMC that the workers currently possess, their attitude to practice and the challenges encountered with practice, and concluding statements were made based on the findings in this section. The concluding statements highlighted the fact that, though the workers displayed a good attitude towards KMC and its practice, they lacked knowledge on some aspects of KMC, such as breastfeeding the infant while in KC position.

The second objective was to describe the challenges faced by OHWs in the implementation of KMC guidelines in Edo State, Nigeria. It was discovered that the workers are challenged by a host of issues pertaining mainly to the unavailability of the KMC document guideline as the respondents said they were unaware of its existence neither were they clear about the institutional policy on KMC. They also lacked in-service training and were not exposed to refresher programmes.

The third objective was to describe the attitude of administrators towards the implementation of early KMC guidelines in healthcare facilities in Edo State, Nigeria. The research finding indicates a positive attitude by the administrators towards KMC since all of them were ready to give their support to its practice in the institution. While this is a good omen, they are

however challenged as revealed in objective four which explored the challenges encountered by the administrators.

The findings indicate that the administrators are handicapped in the provision of KMC due to lack of funds. The administrators lack funds for training and the provision of refresher programmes, to provide sundry consumables and facilities and even to employ additional staff for the unit in order to reduce the workload on the staff. However, they seem to agree that the neonatal nurses are reluctant to give KMC as they perceive it as extra work.

Having identified the challenges the administrators encounter in KMC provision, objective five was to describe the solutions proffered by OHWs and the administrators for early implementation of KMC guidelines in health facilities in Edo State, Nigeria. The study reports that the OHWs suggested improved manpower, provision of the KMC guidelines, release of funds for staff training and cooperation by the managers towards the staff's plight. The administrators on the other hand, recommended improved cooperation by the OHWs while ensuring that the KMC guidelines are accessible to all.

Objective six was to explore the effects of socio-cultural practices on KMC uptake by parents of preterm and LBW infants in Edo State, Nigeria. The findings revealed no known cultural taboo on KMC; rather there were deterrents such as misconceptions and gossip which has its own effects on KMC sustenance.

Objective seven explored the challenges faced by parents of preterm babies in the uptake of KMC in Edo State, Nigeria. These were described by the participants as lack of prior

information on KMC, nurses' poor attitude and inadequate time for practice which was a consequence of the nurses' attitude.

Finally, conclusions were drawn, a strategy was then formulated using the concluding statements as a yardstick. As a result, the respondents in conjunction with the researcher had constructed new knowledge by using inductive and deductive logic as is evident by the audit trail. The respondents' role was that of informing the strategy through their input in the study. This implies that objective eight, which was to develop strategies to enhance the early implementation of KMC guidelines in healthcare facilities in Edo State, Nigeria, was successfully achieved.

The study brings a unique contribution to nursing knowledge because a strategy, that had not been previously formulated, was co-constructed by the participants to improve KMC. The use of inductive and deductive logic is a unique contribution because the researcher could give evidence from empirical data and literature by means of concluding statements. Furthermore, the structure of the strategy is circular in nature which implies the environment in which the strategy was built was all-embracing as all participants had their own unique contributions which was made possible in an all-inclusive environment.

Based on the findings from the study, it was concluded by the researcher that the conceptual and theoretical frameworks actually highlighted the gaps in knowledge and the issue of lack of awareness of KMC raised by parents. This means that the actors were not involved in the development of the document as the framework recommends that for a document to be implemented the implementers (users) have to be involved; thus proving the framework right



and the need for a strategy to enhance early implementation of KMC guideline in Edo State as invaluable at this period as the study had set out to achieve.

### **7.3 STUDY LIMITATIONS**

When this study was conceived by the researcher, she had planned to include health workers at the PHC, secondary and tertiary and the private hospitals. Preliminary investigations done to assess the state of neonatal care in healthcare facilities in Edo State revealed that KMC was practiced only at the tertiary level. Questioning persons on a programme they have limited information about is tantamount to putting the cart before the horse. It was also the intention of the researcher to do an in-depth interview with the administrators and have a focus group discussion with the OHWs. This could not happen because of the busy nature of the administrators' job and the neonatal nurses who run shift duties. Though not impossible it would however have resulted in inconveniencing them. This would have allowed insight into the problems faced by the respondents as they would be allowed to freely verbalise their discontent and how they perceive KMC uptake to be improved. Although a multi-method approach was used in the study, the purpose was not to verify or enhance the previous method, but was executed for convenience sake. Secondly, although a lot of information was gathered, this limitation created a knowledge gap in the strategy as it was created by those at the tertiary level of care only without any contributions or input from the other two levels, and the private sector which are key stakeholders in maternal and child care.

Another major limitation in this study was the issue of time, especially in the second phase which involved the Delphi process. The panelists were really difficult to track and some of them did not respond on time to the questionnaires due to their busy work schedules; they

kept promising to respond at a later date thus reducing the time the researcher had to dedicate to other aspects of the study such as analysing and drawing conclusions. The study has been a pure academic exercise for the award of a Doctoral degree in Nursing and was therefore subjected to timeframes and deadlines which the researcher had to meet; failure to do so would have resulted in having another academic year added to the programme. The slow response of the panelists did not in any way impact on the study outcome, but did affect the researcher's time in tracking them.

#### **7.4 THE RESEARCHERS' REFLECTIONS**

The reflections in this section of the study are purely subjective because they are based on the researcher's experiences during the course of the study.

The healthcare system and environment in Nigeria are challenging for a researcher to conduct health sciences research within a specified period of time. This impacts on the quality of work done because the researcher might be working under intense pressure to meet deadlines for submission for assessment or research funder's timeframe for a report on the project.

Firstly, the bureaucratic nature of getting permission to conduct research in a tertiary health institution was challenging. The researcher had to go through another process of getting ethics clearance which took nearly four months as there was no immediate replacement by management of a member of the committee who had retired. The researcher is of the opinion that though an ethics committee is rightly constituted in this institution, the tenure of members should be stipulated and set periods of inauguration of new members should also be well-articulated so as to allow for speedy replacements and to avoid the possibility of a vacuum. The members' commitment should be towards the patients' welfare and the good

outcome of the study by ensuring the researcher adheres to the rules of research. Furthermore, the committee should not be a money-making venture. This is instructive because the researcher had to make a mandatory payment of ten thousand naira (N10, 000:00) before her application was considered. Thereafter, other rounds of permission and assent to gain access to participants were initiated and crossed. Consequently, the researcher armed herself with copies of the ethics clearance from UWC and UBTH as there was initial unease at constantly seeing the researcher around the NIU (SCBU) and the type of questions asked.

Secondly, research participation among healthcare individuals and managers is still very low. Although these groups ought to appreciate the role of research and participation of all concerned in developing healthcare delivery, the management staff shy away from participating in studies concerning the workers as they see themselves on the side of government and not on that of the workers; thus resulting in false impressions and recommendations. The OHWs and the mothers were more open and forthcoming in their assessment and comments unlike the management staff. There is a feeling of protecting government's policy amongst the managers as the researcher was able to get relevant comments from informal interactions with the unit managers and the medical officer on the very salient issue they referred to as "African culture" that bordered on the provision of the KMC room for mothers who were agitating for this facility.

Witnessing the tiny tots being clutched to the bosom of their mothers, one cannot but marvel at the great sacrifice and pains these mothers go through to ensure that they give their all for the sake of their infant's survival. I guess this reduces the feeling of guilt they suffer at having a preterm birth. No pregnant woman sees premature labour as the end result of her

pregnancy and consequently, the mothers were unprepared physically and psychologically. I share in their hopes and belief in the miracle called KMC. But my concern here is the majority of users who find it difficult to provide the essential items and cost of investigations for their infants coupled with the bed usage fees. Government should take a second look at this policy; these infants have no wish to be “born too soon” neither are their parents prepared for such emergency.

The research journey has actually broadened the researcher’s growth as a novice researcher. Many lessons were learnt through day-to-day interactions with experienced researchers and those who demonstrated knowledge about the concept under investigation. When the whole process is called to mind, it leaves a feeling of pain and tears as lots of challenges were encountered. These ranged from financial, family and domestic challenges, time and frustration that sometimes culminated into a dark phase of contemplating quitting from the programme. These issues notwithstanding, I recall my supervisor’s words of encouragement during one of my episodes of regret at taking up a PHD study, “the race is tougher and painful as you approach the end; just keep on trying your best”. Now I know that perseverance pays.

## **7.5 RECOMMENDATIONS FOR FURTHER MIDWIFERY AND NEONATAL STUDIES**

In this section, recommendations for further studies in nursing practice and nursing education will be made. Reference will be made to the data of this study and its conclusions.

### **7.5.1 Recommendations for further Research**

In view of the findings from this study, the literature review and the conclusions drawn, it is clear that there is room for further research in the field of neonatal nursing especially with regard to KMC in the PHCs and private hospitals. This is due to the fact that many of the preterm births that take place at these levels are unreported and properly documented, but much can be done by empowering the workers and providing public enlightenment.

- ❖ Further studies can be undertaken in the actual implementation of the developed strategies and evaluation of their effect on neonatal mortality reduction after a specified period of time e.g. one year.
- ❖ The perception of KMC by PHC workers should be evaluated.
- ❖ Awareness and utilisation of KMC guidelines among health workers in the private sector should be investigated.

### **7.5.2 Recommendations for Nursing Practice**

The recommendation for nursing practice is in line with the formulated strategies to enhance KMC implementation in healthcare facilities. The implementation of the strategy will benefit not only nursing practice but also neonatology as a whole because nurses are not the only care givers in this branch of medicine. This has to include the maternal and child health unit, public health sector, and ultimately the managers. This implies that:

- ❖ An environment that includes all concerned has to be created and maintained to enable persons to feel appreciated and recognized for their input as no one group can claim superiority over the other.

- ❖ Health workers in special areas like the NICU and the labour ward should be exempted from yearly rotation as is being done with the rest of the staff.
- ❖ Workers who have benefited from any form of training on KMC should be made to give feedback or report so that others can benefit.
- ❖ Workshops on current issues should be held and introduce KMC as a practice that is trending. KMC should become an area where all nurses should keep abreast by highlighting its benefits and making the practical guide accessible to all.
- ❖ Follow up should be done quarterly by specially trained trainers to render on-the-spot assistance to workers who are experiencing difficulties in KMC practice.

### **7.5.3 Recommendation for Nursing Education**

The recommendations in this study will be of importance to nursing education if the need for neonatal mortality reduction is well-articulated in the nursing and midwifery curriculum and hands-on exercise carried out to ensure practice. There should be active participation and supervision at clinical postings of students to make them change agents to drive future practice.

Nurses from private institutions should not be discriminated against in terms of workshops and seminars because a handful of these preterm deliveries take place at the PHCs and private clinics.

### **7.5.4 Recommendation for Policy Implementation**

The recommendations for policy makers are culled from the findings of this study. The various organs of government should ensure proper articulation of policies and

recommendations relating to neonatal health and implement such based on good understanding and cooperation of the implementers. A policy/strategy that is not known to the end users cannot achieve its objective. It is recommended that the strategies be put into practice immediately and not treated as one of those “government papers” since one can only judge the quality of a strategy after having tried and tested it.

## **7.6 SUMMARY**

The purpose of this study was to explore and describe the implementation of KMC guidelines in healthcare facilities in Edo State, Nigeria and to develop a strategy to enhance its early implementation. This chapter provided a reflective overview of the study by evaluating the study in relation to the achievement of the objectives; identifying limitations and providing recommendations for nursing research, nursing practice and nursing education.

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## APPENDICES

### Appendix 1: Questionnaire to the operational health workers

**Instructions:** Read the following questions carefully and tick X in the appropriate columns where strongly agree= 5; agree=4; Neutral =1, strongly disagree=3 disagree=2.

#### *Section 1: Demographic information of respondents*

##### 1. Health Facility

Code	
Tertiary	

##### 2. Age (in years) [ ]

##### 3. Gender

Male	
Female	

##### 4. Designation

NICU Nurse	
Registered Nurse	
Nurse/Midwife	
PNO	
ACNO	

##### 5. Working experience [ ] years

**Section 2: This section is meant to assess your knowledge of KMC.**

**Mark X in the space provided for the most suitable option.**

SN		Yes	No	Don't know
1.	Kangaroo mother care is a method of caring for stable low birth weight preterm infant below 2000grams			
2.	Kangaroo mother care involves skin-to-skin contact between the mother and the low birth weight preterm baby			
3.	In kangaroo mother care method the baby is placed in a kangaroo position on mother's chest			
4.	The baby can be breastfed while on kangaroo mother care method			
5.	The preterm infant on kangaroo mother care method can be discharged early			
6.	Infant on kangaroo mother care method can be discharged if the infant is stable. Gaining weight 15-20gm/kg/day			
7.	The mother practicing kangaroo mother care needs support in the hospital and at home			

**Section 3: The following questions are meant to assess your attitude on KMC. Tick the most appropriate answer in the column provided.**

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
8.	Kangaroo mother care has positive effect on physical wellbeing of the infant					
9.	Infants on Kangaroo mother care have a low risk of hypothermia and infection					
10.	Kangaroo mother care results in more effective breastfeeding					

11.	Kangaroo mother care will reduce hospital stay and cost of health care					
12.	Kangaroo mother care enhances the parents' confidence					
13.	Kangaroo mother care will promote mother infant bonding					
14.	All parents should be encouraged to practice kangaroo care					
15.	All parents should be given relevant information on kangaroo care.					
16.	Facilitating kangaroo care is an added burden to the health staff					

***Section 4: This section asks questions on your participation and supervision of mothers of preterm infants to practice KMC***

		Yes	No
17.	Encouraged mothers in the participation of kangaroo mother care		
18.	Assisted mothers in the participation of kangaroo mother care		
19.	Provided information about kangaroo mother care to parents		
20.	Participated in a training programme about kangaroo mother care		
21.	Been supervised in the technique of kangaroo mother care		

**Section 5: This section is about the challenges you face in the practice of KMC and the suggestions to overcome these challenges.**

**Tick as many as applicable**

<b>SN</b>	<b>Item</b>	<b>Yes</b>	<b>No</b>
<b>22.</b>	Lack of understanding of institutional policy on KMC		
<b>23.</b>	No available KMC protocol and guidelines		
<b>24.</b>	Lack of knowledge		
<b>25.</b>	Lack of update programme on KMC		
<b>26.</b>	Lack of KMC materials and facilities		
<b>27</b>	KMC is an added burden on the already heavy workload in the NICU		
<b>28.</b>	Lack of support from medical personnel		
<b>29.</b>	Lack of support from managers		
<b>30.</b>	Parents unwillingness to sustain practice of KMC		
<b>31</b>	Safety issues for very low birth weight infants is a major constraint		

Section 6 .The space below is meant for your recommendations to solve the challenges highlighted above. Kindly write briefly and clearly in your own words.

**32.**

- 1.-----  
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- 2.-----  
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- 3.-----  
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- 4.-----  
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## Appendix 2: Questionnaires to the Administrators

### Section 1: Demographics

#### 1. Health Facility

Code	
Tertiary	

#### 2. Gender

Male	
Female	

#### 3. Designation

Chief Medical. Director	
Director Nursing. Services	
ADNS & Sectional Head	
NICU Charge Nurse	

#### 4. Working experience [ ] years

#### 5. Health care demographics available for practice of KMC

1.	What year did your institution start KMC implementation?	
ii	Is there an existing institutional KMC Policy?	
iii.	What is the status and size of your hospital?	
iv	What is the estimated number of preterm births annually?	
v	What is the neonatal mortality in your hospital in the last 12months if known?	
vi	What is the neonatal bed occupancy?	
vii	What is the staff strength in the units listed on the right column?	<ul style="list-style-type: none"> <li>▪ ANC:</li> <li>▪ O&amp;G:</li> <li>▪ Paediatrics:</li> <li>▪ NICU:</li> </ul>
viii.	What additional manpower do you require for effective implementation of KMC?	<ul style="list-style-type: none"> <li>▪ ANC:</li> <li>▪ O&amp;G:</li> <li>▪ Paediatrics:</li> </ul>

		<ul style="list-style-type: none"> <li>▪ NICU:</li> </ul>
xix.	Which KMC model do you use?	<ul style="list-style-type: none"> <li>▪ Continuous KMC</li> <li>▪ Intermittent KMC</li> <li>▪ Facility-based KMC</li> <li>▪ Post-discharge KMC</li> <li>▪ None of the above</li> </ul>
x	The listed material resources on the right hand column are essential for KMC uptake. Tick the ones you have on the ground for KMC implementation? You may tick as many as possible.	<ol style="list-style-type: none"> <li>1. Space (ward, outside recreational area) <ul style="list-style-type: none"> <li>▪ Neonatal nursery</li> <li>▪ *Dedicated KMC unit</li> <li>▪ Heating</li> <li>▪ Staff lounge with facilities</li> <li>▪ Lodging for mothers doing intermittent or Continuous KMC</li> </ul> </li> <li>2. Equipment <ul style="list-style-type: none"> <li>▪ Furniture (KMC reclining chairs, beds, tables).</li> <li>▪ Refrigeration.</li> <li>▪ Household equipment (e.g. crockery and cutlery, kettle, washing machine, microwave oven)</li> </ul> </li> <li>3. Household items (needed for continuous KMC) <ul style="list-style-type: none"> <li>▪ KMC wrappers (gown that closes in front for mothers; a receiving blanket to insulate against heat loss across the infant's back).</li> <li>▪ A head cap for the infant</li> </ul> </li> </ol>

		<ul style="list-style-type: none"> <li>▪ Special bedding (e.g. attractive bedspreads).</li> <li>▪ Weighing scales.</li> <li>▪ Curtains.</li> <li>▪ Lounger/chair with foot support.</li> <li>▪ Screen</li> </ul> <p>4. Recreational equipment and material (e.g. TV, reading material for KMC information)</p> <ul style="list-style-type: none"> <li>▪ books, journals, Magazines, Posters, hand bills, DVD</li> </ul> <p>5.other</p> <ul style="list-style-type: none"> <li>▪ audio visuals for parents and staff).</li> </ul>
xi.	What staffing arrangements do you have?	Depends on: 1, Level of nursing care needed 2. Appointments, ranks, experience 3. Staffing continuity
xii.	What are your staffing principles regarding KMC	1. Staff rotations 2. Leadership roles and functions 3. Job descriptions

*Section 2: The following questions are meant to elicit information on your attitude towards KMC. Tick the most appropriate answer you deem fit.*

	<b>Variable</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
6.	Kangaroo mother care has positive effect on physical well-being of the infant					
7.	Infants on Kangaroo mother care have a low risk of hypothermia and infection					
8.	Kangaroo mother care results in more effective breastfeeding					
9.	Kangaroo mother care will reduce hospital stay and cost of health care					
10.	Kangaroo mother care enhances the					



	parents' confidence					
11.	Kangaroo mother care will promote mother infant bonding					
12.	All parents should be encouraged to practice kangaroo care					
13.	All parents should be given relevant information on kangaroo care.					
14.	Facilitating kangaroo care is an added burden to the health staff					
15.	KMC is a practice for preterm newborns in low-income countries only and is a "next best" alternative to incubator care.					

*Section 3: This section asks questions about challenges you encountered with KMC implementation*

*Tick X in column on the right against the applicable answer. You may choose as many as possible.*

		Yes	No
16.	Safety issues for very low birth weight infants is a major constraint		
17.	There are inconsistencies in the practice of KMC		
18.	Medical doctors and Nurses feel KMC is an extra work load		
19.	NICU nurses are reluctant to initiate and practice KMC		
20.	Medical staff are reluctant to initiate and practice KMC		
21.	Lack of experience with KMC		
22.	Belief by parents and staff that technology is better than KMC		
23.	Clients willingness to initiate KMC due to cultural misconceptions		
24.	Lack of sufficient fund to send staff for KMC training & workshop		
25.	Lack of space in NICU to implement KMC		
26.	Lack of funds to provide all the sundry facilities needed for KC		
27.	Lack of funds to provide physical infrastructure		
28.	There is no institutional policy for KMC; It is not well spelt out nor within my powers to initiate one right now in the hospital agenda		

*Section 3: This section explores the recommendation you will proffer to solve the problems identified.*

29. Could you please in your own words suggest ways to meet the challenges you identified in order to improve KMC uptake in your institution and Edo State in general?

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- 2.-----  
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- 3.-----  
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- 4.-----  
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### Appendix 3: Semi-Structured Interview Schedule for Mothers

#### Section 1

##### i) General Information

Time: Start----- End-----

Date of interview	
Place	
Marital status	
Previous preterm babies or miscarriages	
Sex of baby	
Occupation	
Husband's occupation	
Date of admission	
Source: Inpatient Referral	

##### ii). Mothers' Demography

1. Age in years [ ]
2. Level of formal education
  - a. No formal education [ ]
  - b. Primary completed [ ]
  - c. Secondary completed [ ]
  - d. Tertiary [ ]
  - e. Other [ ]
3. The gestational age of this baby? Weeks [ ]
4. Birth weight of this baby? [ ]
5. Age of baby now weeks? [ ]
6. How many live births do you have now including this one? [ ]

*Section 2: Interview guide to answer questions on the objectives*

- 1 What do you know about kangaroo mother care and its advantages?
2. What are the socio-cultural practices that surround child care in your area?
3. How do these practices affect kangaroo mother care?
4. What are the problems you have encountered or envisage at home in the process of practicing kangaroo mother care?
5. What measures would you suggest to improve the uptake of kangaroo mother care?
  - Repetition of the original question;
  - Silent probe, namely the researcher maintaining a long pause that is communicated as an indication that the participant should continue because the moderator is listening;
  - Use of complementary questions that is not directive and open-ended, for example “what was their reaction? How does that affect you? and
  - Use of affirmative comments such as “Uh-Hum” and “Okay

## Appendix 4: Work Protocol for Qualitative Data Analysis



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Dear Mr. Mensah,

Thank you for agreeing to be my co-coder for this research. The objectives of this research are as follows:

1. To explore the knowledge, attitude and practice of operational health workers in Edo State, Nigeria regarding KMC guidelines.
2. To describe the challenges faced by operational health workers in the implementation of early KMC guidelines in Edo State, Nigeria.
3. To describe the attitude of administrators towards the implementation of early KMC guidelines in health care facilities in Edo State, Nigeria.
4. To describe the challenges faced by administrators in the implementation of early KMC guidelines in Edo State, Nigeria.
5. To explore the effects of social-cultural practices on KMC uptake by parents of preterm and LBW infants in Edo State, Nigeria.
6. To explore the challenges faced by parents in the uptake of KMC in Edo State, Nigeria.

7. To describe the solutions proffered by operational health workers, administrators and parents of preterm infants for the early implementation of KMC guidelines in health facilities in Edo State, Nigeria.

8. To develop strategies to enhance the implementation of early KMC guidelines in any healthcare facility in Edo State, Nigeria.

Only the mothers of preterm infants admitted in a tertiary health care facility in Edo State was used out of the three populations for the study.

For this population, semi-structured interviews were conducted and the following four (4) questions were asked:

- 1 What do you know about kangaroo mother care and its advantages?
2. What are the socio-cultural practices that surround child care in your area?
3. How do these practices affect kangaroo mother care?
4. What are the problems you have encountered or envisage at home in the process of practicing kangaroo mother care?

As per our agreement, thirteen (13) transcripts of interviews conducted with the mothers of preterm infants with their individual field notes are enclosed. The method of open coding as described by De Vos (in De Vos et al, 2002:346) is used to analyse data.

The following steps were followed:

Read all the transcripts to get an overall idea.

Choose one transcript and read it again.

Using words and sentences as units of analysis, read the transcript again, and underline the spoken word and sentences.

Transfer the underlined words and sentences to the left-hand column of the transcript together with concepts that are detected as categories.

Write down your personal perceptions on the right-hand column of the transcript.

Then read the categories that were transferred to the right hand column so as to identify the main categories, the sub categories as well as the redundant categories.

Transfer the underlined words (still in the respondent's own words) to a table indicating the main categories, the subcategories and further categories.

Finalise these categories by going through the table again.

Translate the spoken words into scientific language with the possibility that the categorisation can be refined and kept in mind.

As per our prior discussions, the consensus meeting will take place on 29<sup>th</sup> June 2017 by 11:00 hours at Level 13 in the Main Library of UWC.

Thank you.

Mrs. R.E. Esewe (Researcher)

## **Appendix 5: Field Notes**

<b>PARTICIPANT 1</b>
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### **Descriptive notes**

A 30-year-old housewife (a university graduate) referred from Central hospital Warri in Delta State. She is Para 3<sup>0</sup> with the gestational age of her baby at 28 weeks and birth weight 1.35kg. On the day of interview baby was 31weeks old with weight at 1.45kg. This mother looked very calm and confident and but I was not sure of her willingness to talk or share her experiences on the baby and happenings around her. This made it initially difficult to conduct the interview as I could sense some form of resistance. She was initially shy as she sometimes responded in monosyllabic answers of “yes” or “no” which made the researcher to request her to be a bit audible and relax since the exercise was purely an academic one and not for fault finding. She appears to be a strong Christian believer who is grateful to God for the survival of her baby, but was emotional over the uncooperative gesture from the nurses.

### **Reflective notes**

Speaking to her initially was a bit of a put off as she was not relaxed but later opened up as the interview progressed and became more confident to talk to me. I felt she was comfortable in my space. As I listened, I felt a sense of deep understanding having worked in that unit a couple of years ago and seen mothers go through some of these experiences described by her. The biggest driver for KMC as far as I can see here is the love for her baby.

### **Demographic notes**

The interview took place on the 18<sup>th</sup> of August 2015 between 11:00-11:45 at the NICU. The researcher found the mother in the mothers’ room, which was attached to the NICU as previously arranged by the researcher and the mediator. A private lecture room was used and



the interview lasted for about forty-five minutes, there was no distraction of any sort and the weather was conducive.

<b>PARTICIPANT 2</b>
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### **Descriptive notes**

This was a 28- year-old clerical staff member who was married to a secondary school teacher. She was referred from the central hospital in Benin City, when she had a preterm delivery at 35 weeks that weighed 1.55kg. She is a Para 1+<sup>0</sup>. A very reserved young lady who did not want to be seen to complain about anything. She could barely make eye contact with the researcher until the researcher told her she is from the same ethnic group (Esan) as herself.

### **Reflective notes**

This participant was shy and reserved initially as expected in any interview; however, she later felt comfortable enough to share her experiences. I was a bit worried about the way she did not want to be speak genuinely about her experiences at first because as she initially said she did not have any problem with KMC, and later gave a good account of customary child care practices. It could be that she was not sure of the nurses' or her mother-in-law's reaction on what she was going to share with the researcher. Listening to this woman brings painful memories of traditional practices such as female circumcision still enforced by some of these elders even in this age and times. However, like the previous respondent, she is driven by the love for her baby to muddle through the difficulties and practice KMC despite the seeming resentment. It seems that tradition is not necessary as long as child survival is concerned.

### **Demographic notes**

The interview was conducted on the 13 day of September 2015 at the KMC room/medical students' lecture room of the NICU between the hours of 12.00- 12:45. The place was quiet; there was no noise or any form of distractions during the whole exercise.

<b>PARTICIPANT 3</b>
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### **Descriptive notes**

The participant was a 36-year-old trader with primary education and married to a driver. She was referred from a secondary health facility (Stella Obasanjo Women and Children Hospital) where she had her preterm baby at 28 weeks with a birth weight of 1.3kg. She was Para 3+<sup>0</sup>, all alive. The participant seem to be doing well and ready to engage in the interview with the researcher.

### **Reflective notes**

Reflecting on this mother's attitude, I found her a bit haughty, probably due to the fact that she said she had spent close to one month (27 days) in the unit waiting for her baby to gain weight before they can be discharged home. As I scanned through the participants' demographic details, I realised that this was the second referral from Stella Obasanjo Women and Children Hospital in Benin City within a space of five weeks. I said to myself, it would be a good idea to have a well-equipped paediatrics and KMC facility in that hospital. This will reduce the pressure on the staff and facilities in this tertiary hospital. I sat there with the participant who appeared comfortable and relaxed in my space. The realisation of the goodness of KMC practice is so obvious now with these referrals and mothers' experiences. I recall her initial reaction when she was told about the practice ("I told them I will put the

baby anywhere I like, I didn't know one can put baby on the chest—laughing”). My interaction with this woman brings to the fore the many socio-economic challenges faced by clients. She was very critical about the high cost of hospital bills and the lack of amenities in the mothers' room. I really doubt her sincerity and conviction to continue the practice at home.

### **Demographic notes**

The interview took place on the 9<sup>th</sup> of September 2015 at the KMC room/ medical students' lecture room of the NICU between the hours of 12:00- 12:45pm. The place was quiet and there was no noise or any form of distraction during the whole exercise.

<b>PARTICIPANT 4</b>
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### **Descriptive notes**

This participant is a 28-year-old Para 1+<sup>0</sup> referred from St Philomenas' Hospital (A private Catholic maternity hospital). She is a business woman while her husband is a clerical staff member. She had her baby at 36 weeks gestation with a birth weight of 1.5kg. The baby weighed 1.85kg after 6 weeks in the NICU. She is contented and happy at the progress of her baby and her relationship with staff in the unit is cordial.

### **Reflective notes**

The participant is approachable and friendly; she did not have any special experiences to share outside the general lack of information about KMC prior to coming to the NICU as expressed by the other participants in this interview. This participant expressed anger and raised some issues that really bothered me; that of child abandonment. This is a social issue

plaguing the society. Rhetorically, would people rather throw these babies in the dustbin or nurture them in KMC method to maturity irrespective of whether the method is culturally acceptable or not? Secondly, financial constraint is an issue as mentioned by this and previous participants.

### **Demographic notes**

The interview was conducted on the 3<sup>th</sup> of September 2015 at the KMC room/medical students' lecture room of the NICU between the hours of 11:00-11:45. The place was quiet and there was no noise or any form of distractions during the whole exercise.

<b>PARTICIPANT 5</b>
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### **Descriptive notes**

A 31-year-old secondary school teacher whose husband is also employed. She had baby admitted as an in-patient. She is Para 2<sup>0</sup> two alive, gestational age of baby at birth was 31weeks and birth weight was 1.4kg. Baby was 4 weeks old on day of interview.

An evasive mother who did not want to disclose the name of the private hospital she initially attended before referral to UBTH. Answered her questions with some resistance and unwillingness though audibly. Interviewing this mother was a bit difficult thereby forcing the researcher to practically use examples to drive home the meaning of certain concept e.g. method of feeding or weaning the baby as in her culture to encourage the participant to reflect.

### **Reflective notes**

A rather uncooperative mother as far as I can recall, but was able to decipher from the non-verbal cues such as eye contact and nodding of head that she was actually hiding her

knowledge of what the discussion was about. She later relaxed her stance and cooperated. She later felt comfortable and relaxed in my space probably due to her educational level. I guess she was trying to size up the researcher who she later discovered was equally knowledgeable about the subject matter. My interaction with her is another confirmation that a mother can make any sacrifice for her baby's sake irrespective of tradition or cultural resentments and insinuation from relatives and friends. The issue of manpower shortage and inadequate facilities she spoke about is actually very saddening. I keep wondering how the mothers are actually able to cope in such a crowded accommodation in the mothers' room.

### **Demographic notes**

The interview took place on the 6th of October 2015 from 11:00 -11:45 at the NICU. The mother was previously informed and arrangements made to meet her in NICU after feeding her baby in the midmorning. A private lecture room attached to the NICU was used and the interview lasted for forty-five minutes.

<b>PARTICIPANT 6</b>
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### **Descriptive notes**

This participant was a 19-year old primi-gravida who is married to a long-distance driver (trailer driver). Though she completed her secondary education, she is not currently employed. She gets social support from husband and occasionally from relatives. The young mother was a bit nervous initially but was reassured of her safety in terms of disclosure of her experiences by the researcher. She is a bold and confident young mother who was happy at the prospect of going home soon with her baby.

### **Reflective notes**

This young mother liked to talk about the changes she had noticed in her baby since she started KMC practice and some incidences she experienced with the nursing staff and their attitude. As I sat with this young mother and listened to the hurt she felt at the way a nurse rebuked her for a simple reason of forgetting her “buba and wrapper” for KMC, I felt nurses should be more receptive to people irrespective of status or age. Clients are said to have been driven from healthcare facilities to traditional healers because of the critical disposition of the nurses and other healthcare providers. The biggest driver for KMC for this mother again is the love for the baby; neither social nor cultural resentment matter.

### **Demographic notes**

The interview took place on the 6th of October 2015 from 12:15-13:00 at the NICU. The duration of the interview was 45 minutes and it was held at the same venue as with other mothers in the private lecture room attached to the NICU with no interruptions experienced. The mother was already informed and arrangements made to meet her in NICU after the morning routine of expressing of breast milk (EBM).

<b>PARTICIPANT 7</b>
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### **Descriptive notes**

This participant was a 28-year-old unemployed graduate is Para 1+<sup>0</sup> one alive. She was referred from a secondary health facility (Stella Obasanjo Women and Children Hospital) in Benin City. The gestational age of her pregnancy was 32 weeks and 4 days, baby’s birth weight - 1.35kg. However, the baby’s weight on day of interview after been in the NICU for 2 weeks and 5 days was 1.5kg. She was co-operative and relaxed and answered all questions without any inhibitions.

### **Reflective notes**

A confident educated lady who was comfortable in the researcher's space. I really liked her argument as she spoke passionately why tradition ought to support KMC and not condemn it. KMC is about child survival and tradition should encourage it she said. I just said to myself, with this type of strong resolutions and attitude, KMC is going to sell irrespective of traditional beliefs and resentment.

### **Demographic notes**

As already prearranged by the contact nurse in conjunction with the researcher, the interview took place on the 6<sup>th</sup> of October 2015 from 14.00-14:50 at the designated venue as per previous interviews above without any disturbance.

<b>PARTICIPANT 8</b>
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### **Descriptive notes**

Participant was a 25-year-old primipara medical student whose husband was also a medical doctor. A booked case, but had a preterm outcome at 32 weeks plus 2 days with a birth weight of 1.3kg. She was in a very good mood and cooperated well throughout the duration of the interview. She shared her experiences with informed candor.

### **Reflective notes**

Encounter with this lady was very instructive as there were no difficulties in getting one's ideas across. I could sense she was at ease with my presence and felt comfortable enough to have her interview in the private room close to her baby. As I listened to her experiences with KMC practice, I could not but help to reflect on how successful the uptake of KMC would be if expectant mothers have half of the information that she had. It brought to my mind once again the role of education and prior information in the success of KMC. The

concept of KMC if practiced by those who preach it too, will make it more acceptable as displayed by this medical student and her husband who is a medical doctor.

### **Demographic notes**

The interview took place on the 13<sup>th</sup> of October 2015 from 10.00-10.45 inside one of the patient's side room in the NICU. This room is set aside for Very Important Personalities (V.I.Ps) whose babies are stable and do not require oxygenation or any other forms of intervention but only weight gain before discharge. It admits two baby cots and parent chairs. This was a request by the participant before commencement of the interview in the designated venue (KMC room/medical students' lecture room). She wanted to continue with KMC while the interview was going on. She was obliged at the insistence of the ADNS in-charge of the unit. The interview took place without any form of interruption.

<b>PARTICIPANT 9</b>
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### **Descriptive notes**

This participant was a 27-year-old unemployed housewife Para 1+<sup>0</sup>, 2 alive. She had her preterm baby at 32 weeks with a birth weight of 1.2kg. She was referred from a PHCc, had spent 3 weeks and the baby's weight on the day of interview was 1.3kg. She qualified at a college of education but currently works as a hair stylist. She was in good spirit and answered all the questions put to her without any form of hindrances. She is equally well-informed about the goings on as regard the progress of her baby, but not too happy because she is not lactating well as she expected. An amiable and likeable personality, she was confident and answered questions put to her with ease.



### **Reflective notes**

I was fascinated and at the same time reminiscing over the fact that this is another referral from a PHCc. This vindicates the fact that nurses at this level need empowerment on the concept of KMC. Like the previous respondents, she is driven by the love for her child to practice KMC irrespective of challenges. Based on the questions she raised concerning breastfeeding her baby, I begin to wonder about the level of interactions the mothers have with the medical personnel.

### **Demographic notes**

The interview took place on the 18th of October 2015 from 12:00-12:45 at the NICU. The mother was already informed and arrangements were made to meet her in NICU after the morning routine. There was no form of distractions or noise during the interview that took place in the lecture room attached to the unit.

<b>PARTICIPANT 10</b>
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### **Descriptive notes**

Participant was a 34-year-old school teacher whose spouse is a driver. She is Para 1+<sup>0</sup> one alive. She was admitted during labour as an in-patient. Gestational age and weight of baby at birth was 32 weeks and 1.3kg respectively. Weight on the day of admission was 1.6kg after having been in the unit for close to 17 days.

### **Reflective notes**

There was no peculiarity with this participant. She demonstrated enthusiasm and felt relaxed during the interview. Like other previous respondents, the main driver for KMC is the love for her baby; she is not bothered with tradition and culture.

### **Demographic notes**

As already prearranged by the contact nurse in conjunction with the researcher, the interview took place on the 19<sup>th</sup> of October 2015 from 11:00-11:50 at the designated venue as per previous interviews above without any disturbance.

<b>PARTICIPANT 11</b>
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### **Descriptive notes**

This participant is a 29 years old teacher whose husband is a baker. She was referred from a private clinic in Benin City. She had a previous history of a 4-month-old miscarriage. She presented as a friendly but resilient woman who was eager to unburden her worries with the researcher. Though I could sense she was initially tense prior to the interview because she kept postponing the date and time. The interview finally took place in the day room attached to the lying-in ward (M2). Heavy thunder storms made the previous arrangement of the medical students' lecture room impracticable. Raindrops on the roof made it impossible to do a voice recording there.

### **Reflective notes**

This participant became relaxed and started to be herself and talked freely. She was a loud-speaking person and liked to frown while expressing her thoughts. She was very knowledgeable especially about KMC and she had a lot to say about some of the nurse's attitude. It seem to me that this woman may actually saying what some other participants had evaded for fear of victimisation though they had previously been reassured about this. Her interview lasted for one hour because she had a lot to say. As I sat there with her, I could hear some deep-seated anger from her voice and tears were welling up. I did not want to hush or stop her as I could see she was really hurting and bitter about the way some nurses treat

mothers in the KMC unit. Such actions can be a disadvantage to KMC uptake for someone who is informed and on the verge of taking a stand as to whether to practice KMC or not. I want to think of this incidence as an individual thing in order not to generalise or base behaviour on pressure of work.

### **Demographic notes**

The interview took place on the 19<sup>th</sup> of October between 16:00-17:00 in the day room of ward M2. The heavy rain storm that evening turned out to be advantageous as well as problematic; the place was quiet and devoid of noise from in-patients, visitors or the ward routine but audibility was affected by rain drops on the roof. Secondly, the room was dark and there was splash of rain water from the windows which caused some minor adjustment in the sitting positions of both the interviewer and interviewee. By and large the interview was successful.

<b>PARTICIPANT 12</b>
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### **Descriptive notes**

This was a 26- year-old clerical staff worker that is married to a clergy man. She was referred from St Philomena Catholic Hospital (A private mission hospital) with a preterm infant of 32 weeks gestation weighing 1.25kg. She is a Primipara 1+0. She came across as an amicable and resilient woman who though did not expect a preterm birth is now faced with such challenges. She cooperated well during the interview which was held in the NICU KMC room/medical students' lecture room. A seemingly religious and quiet woman who likes to go about the business of nursing her preterm baby in quiet solitude. Barely share banter with co-mothers in the bay. Seem to be meditating in prayers all the time. She consented to the interview and provided responses to all questions put to her.

### **Reflective notes**

In my reflections of my encounter with this participant, I came to the realisation that a lot has to do with her social standing as a clergy's wife. As I was listening to her recount her experiences and the interrogation she had undergone concerning KMC, it was obvious that the resentment she envisages on discharge home, is nothing compared to her baby's' well-being. This again supports what the previous interviewees had to say as per going to any length to bear difficulties and inconveniences for their baby's sake. The love for a child's survival transcends culture, religion and other things.

### **Demographic notes**

The interview took place at the designed venue as per other participants in the medical students' lecture room without any disturbance from anybody on the 20<sup>th</sup> of October between the hours of 16.00 -16:45.

<b>PARTICIPANT 13</b>
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### **Descriptive notes**

This participant was a 30-year-old businesswoman whose spouse is a business man. This was her second delivery at the gestational age of 32 weeks in the UBTH; the baby weighed 1.2kg. She was referred from Stella Obasanjo Women and Children Hospital in Benin City though she had the baby as an in-patient. On the day of the interview, she had spent close to six weeks in the NICU and the baby's weight is now 1.65kg. She was relaxed and answered all the questions posed to her during the interview. There was something very spectacular about this participant. Her mood and reactions can be described as complacent.

**Reflective notes**

This participant appeared to feign ignorance of the concept of KMC and infant feeding culturally but she later agreed to some suggestions on prodding by the researcher. She however relaxed her initial stance and cooperated and answered all the questions during the interview session with monosyllabic answers. Guess she is tired of staying in the hospital (six weeks). She has the same resolve to stand up for the good of her baby and give KMC.

**Demographic notes**

The interview took place on the 29<sup>th</sup> of October 2015 at the KMC room/medical students' lecture room of the NICU between the hours of 11:00-11:45. The place was quiet and there was no noise or any form of distractions during the whole exercise.\

## Appendix 6: Information Sheet for Delphi Technique- Phase 2



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### **INFORMATION SHEET**

**Title of Research: Developing Strategies to Enhance Implementation of Early Kangaroo Mother Care Guidelines in Health Care Facilities in Edo State, Nigeria**

#### **What is this study about?**

This is a research project being conducted by Roselynd Esewe at the University of the Western Cape. We are inviting you to participate in this research project because you are a public health nurse/midwife, neonatal intensive care nurse (NICN), a paediatrician, a gynaecologist, an administrator, mother of a preterm baby who practiced KMC previously, or an academic staff in a nursing faculty in Edo State. The purpose of this research is to develop strategies to enhance early implementation of Kangaroo mother care guidelines in health care facilities in Edo State, Nigeria. The Delphi method is intended as the final phase to refine the strategy.

A Delphi is a systematic forecasting method that involves structured interaction among a group of experts on a subject. Thus, it may be referred to as an **expert** brainstorm.

## **What will I be asked to do if I agree to participate?**

You will be asked to:

1. Read through an initial draft strategy document developed by the researcher which is attached to this document and assist in refining it by your candid opinions and suggestions.
2. Assist by acting as quality assurer in refining a strategic document which is acceptable and feasible and shall lead to the early KMC implementation guideline for use in all health facilities across Edo State.
3. Complete three to four rounds involving a series of questionnaires, each building on the results of the previous one. The results of each round shall be compiled and returned to you. Over successive iterations, you will be able to reevaluate your responses in light of the complied responses of other panelists.
4. The first round of the questionnaire may take up to one hour while subsequent ones could last for approximately 30-45 minutes of your time at home or in the hospital.
5. You will return the completed questionnaire in a closed envelope that shall be provided or you will send it back to the researcher via her e-mail address.
6. The questions will seek information on whether the draft strategy is acceptable and additional inputs from you as an expert/ panelist. The focus will be on enhancing early implementation of Kangaroo Mother Care guidelines based on the conclusion statements and problems identified in the first phase of the study that explored NICU nurses, administrators and mothers of preterm babies

**Would my participation in this study be kept confidential?**

The researchers undertake to protect your identity and the nature of your contribution. To ensure your anonymity, your names will not be required in the questionnaires, rather code numbers will be attached to the returned questionnaires and interview schedules will bear pseudonyms to ensure they are not traced to you. All the personal information and responses in the questionnaires shall be kept in a secure place for five years after the results of the research have been published. The questionnaires shall remain anonymously labeled to prevent linking the responses with your personal identification through the use of identification key. Only the researchers will be able to link the survey to your identity.

To ensure your confidentiality, data shall be locked in secured filing cabinets using identification codes only on data forms and pass word protected computer files known only to the researcher and supervisor during and the data analysis. These shall be kept for at least five years before they are destroyed. If we write a report or article about this research project, your identity will be protected. The researchers will not mention your names or the name of the institution in the publication of the research findings.

**What are the risks of this research?**

All human interactions and talking about self or others carry some amount of risks. We will nevertheless minimize such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.



**What are the benefits of this research?**

This research is not designed to help you personally, but the results may help the investigator learn more about challenges faced by operational health workers, managers and parents of preterm infants in the implementation of KMC as a method of neonatal care and thereafter develop strategies to enhance its early implementation guidelines as a method of reducing infant deaths. We hope that, in the future, other people might benefit from this study through improved understanding of these strategies.

The strategies for early implementation of KMC guideline that shall be developed will also contribute to the knowledge base of nursing practice in the sense that they will serve as a reference point for nurses in the care of preterm and low birth weight infants and may throw more light and inform research on fears and hindrances faced by caregivers and administrators in the implementation of KMC guidelines.

**Do I have to be in this research and may I stop participating at any time?**

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, no grudge shall be held against you.

**What if I have questions?**

This research is being conducted by Roselynd Esewe from the School of Nursing at the University of the Western Cape, South Africa. If you have any questions about the research study itself, please contact Roselynd Esewe at:

Department Nursing Science

School of Basic Medical Sciences,

University of Benin, Benin City,

Edo State, Nigeria.

Cell Phone: 08023368031; +27738027593

Email: rossysewe@yahoo.com

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

**Head of Department/Project Supervisor:**

Professor Deliwe Phetlhu

School of Nursing, University of the Western Cape

Private Bag X17, Belville 7535

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**Dean of the Faculty of Community and Health Sciences:**

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University of the Western Cape

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This research has been approved by the University of the Western Cape's Senate Research Committee.

## Appendix 7: ROUND ONE DELPHI PANELIST QUESTIONNAIRE

### UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa



Tel: +271-9592271 Fax: 2721 9592679

[www.uwc.ac.za](http://www.uwc.ac.za)

Dear Sir/ Madam/Chief /Prof,

Thank you for agreeing to participate in this Delphi survey on the implementation strategies for early kangaroo mother care guidelines in Edo State, Nigeria. This study forms part of a two-phased PHD Thesis being undertaken in the University of the Western Cape, South Africa.

This questionnaire round is the first of up to three rounds of the survey. Please try to answer all the questions as we expect you to have in-depth knowledge of all of them. You will have the opportunity to revise your answers with subsequent rounds of the survey.

In these surveys, you will be asked to act as quality assurers to help refine strategies in terms of its authenticity, usability and relevance. The draft strategy was developed by the researcher from a list of conclusion statements and problems identified in the first phase of the study that investigated operational health workers, administrator/managers and mothers of preterm infants on the knowledge, attitude and practice of KMC as well as challenges encountered in practice.

**Instructions:** The questions can be answered with only a single selection, a space is also provided for you to comment on the underlying reasons for your responses. In formulating your

responses, you are not expected to assess the feasibility or cost of data collection for the indicators.

Once I have received responses from all panelists, I will collate and summarize the findings and formulate the second questionnaire. You should receive this in the next two weeks. I assure you that your participation in the survey and your individual responses will be strictly confidential to the research team (supervisor and statistician) and will not be divulged to any outside party, including other panelists.

Username (email address): Roselynd Esewe>3236081@my uwc.ac.za; +2348023368031

Postal address: Nursing Science Department, SBMS, University of Benin, PMB, 1154, Benin City, Edo State, Nigeria.

## SECTION A

This section asks questions about your social demographics.

Mark X on the appropriate column on the right hand side.

### 1. Area of Specialty

Paediatrics	
Obstetrics/gynaecology	
Neonatal nursing	
Hospital administrator/ Med Practitioner	
Nursing Administration	
Neonatal Nursing/Management	
Public Health /Management	
Parent (Mother of preterm baby)	
Faculty (Lecturer)	
Other	

### 2. Gender

Male	
Female	

3. Which of the under listed best describes your designation?

Chief Medical. Director	
Director/Deputy Director	
Consultant	
SHO	
DNS	
ADHS	
ADNS & Sectional Head	
NICU Charge Nurse	
PNO	
SNO	
Secondary School teacher	
Senior Lecturer	

4. Working experience

Below 10 years	
10-19yrs	
20-29yrs	
30 years and above	

## SECTION B

This section seeks your input on the ways to improve early KMC implementation guidelines in healthcare facilities in Edo State. Kindly assess the vision, mission and value statements, as well as the objectives and functional tactics for their relevance, authenticity, and usability. Choose from the response indicators on a Likert scale of four where: 4= Excellent; 3= Very good; 2= Good; 1=Poor.

B.1: This section asks questions about the vision statement for the operational health workers.

Vision Statement: *“Provides quality KMC healthcare service for all based on excellence in nursing practice that is recognised nationally and internationally”*

Variable	Excellent	Very Good	Good	Poor
1. It is understandable and can be shared by members of the organisation.				
2. It is broad enough to include diverse variety of local perspectives.				
3. It is inspiring and uplifting to everyone involved.				
4. It is easy to communicate.				

Use the section below to kindly answer the following questions on vision statement.

5. Give reasons for your scores in the section on vision statement just completed

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 -----

6. What would you want included in the section?

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 -----

7. Why do you want item 6 above included?

B2: This section asks your opinion on the mission statement for the operational health workers.

Mission Statement: *“To improve the health of neonates and all people in Nigeria through excellence in health practice and innovations to advance the nursing profession through dynamic quality driven nursing services that is nationally and internationally recognised for its effectiveness and efficiency; and provides benefits for all stake holders both internal and external”.*

Variable	Excellent	Very Good	Good	Poor
8. It is short and has emotional appeal				
9. It is memorable: People can see and remember it.				
10. It is unique to the statements on KMC to staff members and parents of preterm infants.				
11. It is realistic: it captures the mission statement enshrined by the 3 stake holders (FGN, NMCN &UBTH).				
12 It is current and does not have to be changed often.				
13. It is clear and focused.				
14 It is succinct: short, snappy and possible.				

Use the section below to kindly answer the following questions on mission statement.

15. Motivate for your scores in the section on mission statement just completed.

16. What would you want included in the mission statement?

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17. Why do you want item 16 above included?

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This section asks questions about the value statement for the operational health workers.

B.3: Value Statement: *“Maintenance of professional ethics through human dignity and human right, confidentiality and been culturally sensitive to gender, shared responsibility and commitment to international best practices for health.”*

Variable	Excellent	Very Good	Good	Poor
18. It captures the culture of the organisation in terms of ethics and non- discrimination based on race culture or gender.				
19. It describes the guiding principles.				
20. It contains organisational culture.				
21. It describes expectation of staff.				
22 It describes the ethics and morality and integrity, trust and excellence in practice.				

Use the section below to kindly answer the following questions in your own words.

23. Give reasons for your scores in the section on value statement just completed.

-----  
 -----

24. What would you want included in the section on value statement?

-----  
 -----

25. Why do you want item 24 above included?

-----  
 -----

B.4: This section asks questions about the principles of the operational health workers.

Principles: *“Provision of health services to the parents of preterm infants that are gender sensitive, evidence based, responsive, pro-poor and sustainable with a focus on outcome”*

Variable	Excellent	Very Good	Good	Poor
26. It meets the target customers’ satisfaction.				
27. It Involves all concerned (Parents of preterm babies and staff).				
28. It is multi-sectoral (able to sustain partnership coordinate care).				
29. The method of governance is transparent, accountable to all concerned.				

Use the section below to kindly answer the following questions in your own words.

30. Give reasons for your scores in the section on principles just completed.

-----  
 -----

31. What would you want included in the section on principles?

-----  
 -----

32. Why do you want item 31 above included?

-----  
 -----

B.5: This section asks questions about the objectives, functional plans and tactics developed to enhance the implementation of early KMC guidelines by the operational health workers.

To answer the following questions, kindly refer to page 12-20 of the draft strategic document sent to you. This is to reduce the bulky nature of the questionnaire.

<b>Objective 1</b>	<b>Functional Plan</b>	<b>Tactics</b>		
Variable	Excellent	Very Good	Good	Poor
33 It is specific, concrete, detailed and well defined.				
34. It is measureable in terms of numbers and quantity.				
35. It is achievable: feasible and actionable.				
36. It is realistic considering resources.				

Use the section below to kindly answer the following questions in your own words.

37. Give reasons for your scores in the section on objective 1 just completed.

-----  
 -----

38. What would you want included in the section on objective 1?

-----  
 -----

39. Why do you want item 37 above included?

-----  
 -----

-



<b>Objective 2</b>	<b>Functional Plan</b>	<b>Tactics</b>		
Variable	Excellent	Very Good	Good	Poor
40. It is specific: concrete, detailed, well defined.				
41. It is measureable: in terms of numbers & quantity.				
42. It is achievable: feasible & actionable.				
43. It is realistic: considering resources available.				

Use the section below to kindly answer the following questions in your own words.

44. Give reasons for your scores in the section on objective 2 just completed.

-----  
 -----

<b>Objective 3</b>	<b>Functional Plan</b>	<b>Tactics</b>		
Variable	Excellent	Very Good	Good	Poor
45. It is specific: concrete, detailed, and well-defined.				
46. It is measureable: in terms of numbers and quantity.				
47. It is achievable: feasible and actionable.				
48. It is realistic considering resources.				

Use the section below to kindly answer the following questions in your own words on objective 3.

49. Give reasons for your scores in the section on objective 3 just completed.

-----  
 -----

50. What would you want included in the section on objective 3?

-----  
 -----

51. Why do you want item 50 above included?

-----  
 -----

<b>Objective 4</b>	<b>Functional Plan</b>	<b>Tactics</b>		
Variable	Excellent	Very Good	Good	Poor
52. It is specific: concrete, detailed and well-defined.				
53. It is measureable: in terms of numbers & quantity.				
54. It is achievable: feasible and actionable.				
55. It is realistic: considering resources.				

Use the section below to kindly answer the following questions in your own words.

56. Give reasons for your scores in the section on objective 4 just completed.

-----  
 -----

57. What would you want included in this section on objective 4?

-----  
 -----

58. Why do you want item 57 above included?

---

<b>Objective 5</b>	<b>Functional Plan</b>	<b>Tactics</b>		
Variable	Excellent	Very Good	Good	Poor
59. It is specific: concrete, detailed and well-defined.				
60. It is measureable: in terms of numbers and quantity.				
61. It is achievable: feasible and actionable.				
62. It is realistic considering resources.				

Kindly use the section below to answer the following questions in your own words.

63. Give reasons for your scores in the section on objectives just completed.

-----  
-----

64. What would you want included in the section on objectives?

-----  
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65. Why do you want item 64 above included?

-----  
-----

**THANK YOU FOR YOUR QUICK RESPONSE TO THIS QUESTIONNAIRE**

## Appendix 8: ROUND TWO QUESTIONNAIRE

The following domains were amended based on comments and recommendations from panelists with scores less than 75%, including you. Examples of how the functional plans and tactics shall be measured are in italics. Kindly reassess or give reasons why you wish to maintain your previous scores.

### Instructions

1. To answer the following questions, kindly refer to pages 9-12 of the draft strategic document sent to you.

2. Choose from the response indicators on a Likert scale of four where: 4= Excellent; 3= Very good; 2= Good; 1=Poor. Tick X in the column chosen.

B.1: This section asks questions about the vision statement for the operational health workers.

**PREVIOUSLY STATED VISION:** Provide quality KMC healthcare services be for all based on excellence in nursing practice that is recognised nationally and internationally.

**NEW VISION STATEMENT:** *“To provide kangaroo care to preterm infants through facilitation by their parents that will enable transformation of better skills from operational health care workers to improve the knowledge of parents of preterm and LBW infants in neonatal care through excellence in nursing practice to reduce neonatal mortality globally”.*

Variable	Excellent	Very Good	Good	Poor
1. It is understandable and can be shared by members of the organization.				
2. It is broad enough to include diverse variety of local perspectives.				
3. It is inspiring and uplifting to everyone involved.				
4. It is easy to communicate.				

B2: This section asks your opinion on the mission statement for operational health workers.

**PREVIOUSLY STATED MISSION:** To improve the health of neonates and all people in Nigeria through excellence in health practice and innovations to advance the nursing profession through dynamic quality driven nursing services that is nationally and internationally recognized for its effectiveness and efficiency; and provides benefits for all stake holders both internal and external.

**NEW STATED MISSION:** *To reduce neonatal mortality rate through effective, efficient and dynamic global nursing practice by the operational health workers, the administrators, and parents of preterm infants.*

Variable	Excellent	Very Good	Good	Poor
5. It is short and has emotional appeal				
6. It is memorable: People can see and remember it.				
7. It is unique to the statements on KMC to staff members and parents of preterm infants.				
8. It is realistic: it captures the mission statement enshrined by the 3 stake holders (FGN, NMCN &UBTH).				
9. It is current and does not have to be changed often.				
10. It is clear and focused.				
11. It is succinct: short, snappy and possible.				

B.3: This section asks your opinion on the value statement for operational health workers.

**PREVIOUSLY STATED VALUE STATEMENT:** “Maintenance of professional ethics and been culturally sensitive to gender, shared responsibility and commitment to international best practices for health.”

**NEW VALUE STATEMENT:**

- *Maintenance of professional ethics;*
- *Cultural sensitivity to gender, shared responsibility and commitment to international best practices for health.*

Variable	Excellent	Very Good	Good	Poor
12. It captures the culture of the organisation in terms of ethics and non- discrimination based on race, culture or gender.				
13. It describes the guiding principles.				
14. It contains organisational culture.				
15. It describes expectation of staff.				
16. It describes the ethics, morality, integrity, trust and excellence in practice.				

B.4: This section asks questions the principles of operational health workers.

***PREVIOUSLY STATED PRINCIPLES:*** Provision of health services to the parents of preterm infants that are gender sensitive, evidence based, responsive, pro-poor and sustainable with a focus on outcome.

***NEW STATED PRINCIPLES:***  
*To provide sustainable evidence based, responsive, gender sensitive and pro-poor health care to the preterm infants;*  
*To facilitate and encourage kangaroo care by parents with a focus on good outcome*

Variable	Excellent	Very Good	Good	Poor
17. It meets the target customers' satisfaction.				
18. It Involves all concerned (Parents of preterm babies and staff).				
19. It is multi-sectoral (able to sustain partnership & coordinate care).				
20. The method of governance is transparent, accountable to all concerned.				

B.5: This section asks questions about the objectives, functional plans and tactics developed to enhance the implementation of early KMC guidelines by the operational health workers.

To answer the following questions, kindly refer to page 16-20 of the draft strategic document sent to you. This is to reduce the bulky nature of the questionnaire.

<b>Objective 1</b>	<b>Functional Plan</b>	<b>Tactics</b>		
Variable	Excellent	Very Good	Good	Poor
21. It is specific, concrete, detailed and well-defined.				
22. It is measureable in terms of numbers and quantity (e.g. <i>Number of seminars &amp; workshops organised to increase knowledge, reduction in neonatal mortality rate, increase manpower and incentives such as award and recognition for service; orientation programmes for new staff</i> ).				
23. It is achievable: feasible and actionable.				
24. It is realistic considering resources.				

<b>Objective 2</b>	<b>Functional Plan</b>	<b>Tactics</b>		
Variable	Excellent	Very Good	Good	Poor
25. It is specific: concrete, detailed, and well-defined.				
26. It is measureable: in terms of numbers and quantity (e.g. <i>Manpower supply, increased interest in neonatal nursing/ association membership; publications/workshop/seminar presentations</i> ).				
27. It is achievable: feasible and actionable.				
28. It is realistic: considering resources available.				

<b>Objective 3</b>	<b>Functional Plan</b>	<b>Tactics</b>		
Variable	Excellent	Very Good	Good	Poor
29. It is specific: concrete, detailed, and well-defined.				
30. It is measurable: in terms of numbers and quantity (e.g. <i>facilitators' report, Persons who have access to /aware of KMC guidelines, number of voluntary organisations formed to increase awareness</i> )				
31. It is achievable: feasible & actionable.				
32. It is realistic considering resources.				
33. It is specific, concrete, detailed and well-defined.				

<b>Objective 4</b>	<b>Functional Plan</b>	<b>Tactics</b>		
Variable	Excellent	Very Good	Good	Poor
34 It is specific: concrete, detailed and well-defined.				
35. It is measurable: in terms of numbers and quantity (e.g. <i>Attendance at neonatal meeting/workshops, responses to text messages, feedback from KMC facilitators, increase in enrolment for neonatal course</i> ).				
36. It is achievable: feasible and actionable.				
37. It is realistic: considering resources.				

<b>Objective 5</b>	<b>Functional Plan</b>	<b>Tactics</b>		
Variable	Excellent	Very Good	Good	Poor
38. It is specific: concrete, detailed and well-defined.				
39. It is measurable: in terms of numbers and quantity (e.g. <i>Annual review of mothers who practice Kangaroo care, neonatal mortality and morbidity rate</i> )				
40. It is achievable: feasible and actionable.				
41. It is realistic considering resources.				



42. Give reasons why you want to maintain your previous scores if any.

Objective 6	Functional Plan	Tactics		
Variable	Excellent	Very Good	Good	Poor
42. It is specific: concrete, detailed and well-defined.				
43. It is measureable: in terms of numbers and quantity ( <i>e.g. Annual review of mothers who practice Kangaroo care, neonatal mortality and morbidity rate</i> )				
45. It is achievable: feasible and actionable.				
46. It is realistic considering resources.				

-----

-----

-----

**THANK YOU FOR YOUR QUICK RESPONSE TO THIS QUESTIONNAIRE.**

**Appendix 9: Consent Form Quantitative Data Collection**



**UNIVERSITY OF THE WESTERN CAPE**

Private Bag X 17, Bellville 7535, South Africa

Tel: +2721-9592271 Fax: 27219592679

E-mail: [www.uwc.ac.za](http://www.uwc.ac.za)

**CONSENT FORM**

**Title of Research Project: Developing Strategies to Enhance Implementation of Early Kangaroo Mother Care Guidelines in Health Care Facilities in Edo State, Nigeria**

The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.

**Participant's name.....**

**Participant's signature.....**

**Date.....**

**Appendix 10: Consent Form for Semi Structured Interview**



University of the Western Cape

Faculty of Community and Health Sciences

P/Bag X17, Bellville 7535, South Africa Tel.: +27 21 959 2163 Fax: +27 21 959 2755 E-mail: www.uwc.ac.za

**Title of Research Project:** “Developing Strategies to Enhance Implementation of early Kangaroo Mother Care Guidelines in Health Care Facilities in Edo State, Nigeria”

I confirm that I have read and understood the information on the above study and a description of the study has been given to me in the language that I understand. I therefore, willingly decide to take part in the study and understand that my participation is voluntary. My questions about the study have been answered and I understand that confidentiality will be maintained. I am free to withdraw at any time from the study without any penalty or effect on my care. I agree to be audio-taped during my participation in the study. I will not disclose any information that was discussed during the interview session.

Identification number.....

Participant’s signature.....

Date.....

Should you have any questions or problems you have experienced related to the study please contact the study coordinator.

**Study Coordinator:** Professor Deliwe Rene Phetlhu

School of Nursing,

University of the Western Cape

Private Bag X17, Bellville 7535

Cape Town. Republic of South Africa. Telephone: +27(21)-9593003

## Appendix 11: Co-Coder Certification

### Qualitative Data Analysis

---

PhD in Nursing

**Roselynd Ejakhianghe FSEWE**

THIS IS TO CERTIFY THAT

Mr. Clement Mensah has co-coded the following qualitative data:

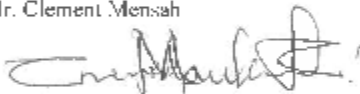
13 Individual Qualitative Interviews

For the study:

"DEVELOPING STRATEGIES TO ENHANCE IMPLEMENTATION OF EARLY KANGAROO MOTHER CARE GUIDELINES IN HEALTH CARE FACILITIES IN EDO STATE, NIGERIA"

I declare that the candidate and I have reached consensus on the major themes, categories and codes reflected by the data during a consensus discussion. I further declare that adequate data saturation was achieved as evidenced by repeating themes.

Mr. Clement Mensah



(Statistical and Writing Coach, Postgraduate Division – UWC)

[mcashine@gmail.com](mailto:mcashine@gmail.com)

## Appendix 12: Language Editors Certificate

27 November 2017

### LANGUAGE EDITOR CERTIFICATE

This is to certify that the thesis entitled ‘Developing Strategies to Enhance Implementation of Early Kangaroo Mother Care (KMC) Guidelines in Healthcare Facilities in Edo State, Nigeria’ submitted by Roselynd Ejakhianghe Esewe was edited by the undersigned.

The onus is however on the author to make the changes suggested and to attend to queries.

Kindly note that formatting and reference checking were excluded.

Sincerely

(Signature withheld for technical reasons)

.....

Gava Kassiem

Independent Language Consultant/Academic Editor/Academic Content Developer

MA (Language Practice)

Associate Member of Professional Editors’ Guild

Email: gkassiem@gmail.com

Mobile: +27(0)82 4467400

Skype ID: gavakassiem.2

## Appendix 13: University of Benin Teaching Hospital Ethics Clearance



### UNIVERSITY OF BENIN TEACHING HOSPITAL P.M.B. 1111 BENIN CITY NIGERIA

Telephone: 052-600418  
Telegram: UNITECHOS, BENIN  
Telex: 41120 NG  
Website: ubth.org

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**CHIEF MEDICAL DIRECTOR:** PROF. M.O. IBADIN  
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**CHAIRMAN, MEDICAL ADVISORY COMMITTEE:** PROF. G.E. OFOVWE  
B.M, B.ch, FWACP (Paed)  
E-mail: [ofovwegabriel@gmail.com](mailto:ofovwegabriel@gmail.com)

**DIRECTOR OF ADMINISTRATION:** A.P. OMOREGIE (MRS)  
B.Sc, MSc, MHPH  
E-mail: [officeoftheda@ubth.org](mailto:officeoftheda@ubth.org)

### ETHICS AND RESEARCH COMMITTEE CLEARANCE CERTIFICATE

PROTOCOL NUMBER: ADM/E 22/A/VOL. VII/266

PROJECT TITLE: "DEVELOPING STRATEGIES TO ENHANCE IMPLEMENTATION OF EARLY KANGAROO MOTHER CARE GUIDELINE IN HEALTH CARE FACILITIES IN EDO STATE".

PRINCIPAL INVESTIGATOR(S) ROSELYND E. ESEWE

DEPARTMENT/INSTITUTION: FACULTY OF COMMUNITY AND HEALTH SCIENCES, UNIVERSITY OF THE WESTERN CAPE, SOUTH AFRICA

DATE CONSIDERED SEPTEMBER 30<sup>TH</sup>, 2015

DECISION OF THE COMMITTEE: APPROVED  
REMARK:

CHAIRMAN: PROF. A.N. ONUKU

SIGNATURE & DATE

SUPERVISOR: PROF. DELIWE RENE PHETLHU

DECLARATION BY INVESTIGATOR(S):

PROTOCOL NUMBER (please quote in all enquiries)

To be completed in four and three copies returned to the secretary, Ethics and Research committee, Clinical services and Training Division, University of Benin Teaching Hospital Benin City.

I/We fully understand the conditions under which I am/we are authorized to conduct the above mentioned research and I/We undertake to resubmit the protocol to the Ethics and Research Committee.

Signature.....

Date.....



## Appendix 14: UWC Ethics Certificate



**OFFICE OF THE DEAN  
DEPARTMENT OF RESEARCH DEVELOPMENT**

15 June 2015

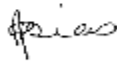
**To Whom It May Concern**

I hereby certify that the Senate Research Committee of the University of the Western Cape approved the methodology and ethics of the following research project by:  
Mrs R Esewe (School of Nursing)

Research Project:	Developing strategies to enhance implementation of early kangaroo mother care guidelines in health care facilities in Edo State, Nigeria
Registration no:	15/4/30

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

The Committee must be informed of any serious adverse event and/or termination of the study.



*Ms Patricia Josias  
Research Ethics Committee Officer  
University of the Western Cape*

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[www.uwc.ac.za](http://www.uwc.ac.za)

A place of quality,  
a place to grow, from hope  
to action through knowledge

**Appendix 15: DRAFT STRATEGIC DOCUMENT TO DELPHI PANELIST**

**ON  
STRATEGIES TO ENHANCE EARLY IMPLEMENTATION OF KMC  
GUIDELINES  
IN HEALTH FACILITIES IN EDO STATE, NIGERIA**

**By  
ROSELYND ESEWE: MAT. NO. 3263081**

**SCHOOL OF NURSING, FACULTY OF CHS  
UNIVERSITY OF THE WESTERN CAPE  
BELLVILLE 7535, SOUTH AFRICA**

**Programme: PHD**

**SUPERVISOR: PROF. D. R. PHETLHU**



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## **1.0 Background of the Study**

Preterm-related deaths stand at 15 million globally; 4 million occur during the neonatal period (Blencowe, Cousens, Oestergaard, Chou, Moller & Narwal et. al., 2012). Developed countries contribute only 1% of this figure while developing countries, especially Sub-Saharan Africa, accounts for 1.16 million (WHO, 2012). Currently, Nigeria has the highest absolute number of newborn deaths among countries in Africa with 28% premature births in Sub-Saharan Africa. It also ranks seventh among the 10 African countries where newborns have the highest risk of dying with over 700 newborn deaths occurring each day. The under-fives mortality rate of 176/1000 live births is still twice above the WHO MDG 4 and 5 target of 77 /1000 projections by 2015 which has come and gone and this problem found base in the Strategic Development Goals 2020. More worrisome is the fact that Edo State, one of the 36 states in Nigeria, contributes about 6700 neonatal deaths to this figure annually (Aboda & Williams, 2011; NAS, 2009).

In order to stem this tide, WHO formally endorsed Kangaroo Mother Care (KMC) which is a method of care for newborn babies especially those born prematurely and with low birth weight (LBW). A KMC practice guideline was published in 2003 from which countries can formulate policies, protocols and training manuals. Nigeria incorporated this policy guideline into some policies and programmes such as the Infant Maternal Newborn and Child Health (IMNCH) and the infant and young child feeding guidelines in 2007 (FMOH, 2011b; WHO, 2003). KMC can be practiced in any context and is initiated with the support and supervision of the healthcare staff to help a mother become her baby's primary caregiver (Nyqvist, Anderson, Bergman, Cattaneo, Charpak & Davanzo et al., 2010). Its main goal is to reduce the risks of mortality and morbidity due to hypothermia, hypoglycaemia and infection among others (FMOH, 2011b).

It is however unclear what the knowledge and attitude of nurses working in the areas that provide child health services are, nor what challenges are faced in KMC practice by them and hospital administrators. Similarly, the effect of socio-cultural practice on KMC uptake by mothers of preterm infants is unknown.

### **1.1 Problem Statement**

KMC has been established as a safe and effective method of infant care, with the potential for improving the survival of LBW infants, especially in low-and middle-income countries for over three decades now. Many education and training efforts have been explored and employed by some countries, including Nigeria (Aboda & Williams, 2012). Some countries are reportedly having difficulties in increasing their coverage and implementation of KMC beyond the initial programme set up by organised bodies like UNICEF and Save the Children initiative (Aboda & Williams, 2012; Bergh, Manu, Davy, Van Rooyen, Quansah Asare, Awoonor-Williams, Dedzo, Twumasi, & Nang-Beifubah, 2013; NAS, 2009). Individual institutions still have difficulties in getting KMC institutionalised as a policy or maintain it in a sustainable way (Davanzo, Brovedani, Travan, Kennedy, Crocetta & Sanesi et al., 2013). This has resulted in implementation that is intermittent. In addition, the researcher observed that KMC has not expanded beyond the teaching hospitals and a few secondary healthcare facilities despite the fact that majority of the births takes place at the primary level of care where there is a dearth of paediatricians.

Literature highlights the role of neonatal nurses in the implementation and care of preterm infants using KMC. (Nyqvist, Anderson, Bergman, & Mendoza et. al, 2010). Health workers at all levels, especially those working in the maternity and neonatal areas have important roles to play in the achievement of the Sustainable Development Goals (SDGs 2030) which has now replaced the MDGs, especially goal 3 which is related to healthy lives and promotion of well-being for all at all ages. Edo State has adopted the WHO (2003) KMC

policy guidelines into several of its maternal and child health policies; however the implementation is observed to be poor or non-existent in some health facilities. It is instructive to remark that the document in question may just be regarded as an oral intention because the researcher was unable to obtain a copy. Even in facilities where KMC is practiced, nurses still need to be prompted to initiate KMC and get the consent of the doctors who are few and in many instances unavailable.

The amount of knowledge, attitude and the challenges nurses have with implementation of KMC guidelines is not clear; neither is the attitude and challenges the administrators face with KMC implementation known. Furthermore, there is limited documented evidence on cultural issues related to KMC uptake and challenges faced by parents in Nigeria and Edo State in particular.

## **1.2 Aim of the study**

This study seeks to develop strategies to enhance early implementation of KMC guidelines in health facilities in Edo State. Walt and Gilson's (1994) health policy analysis triangle was used as a framework to explore the knowledge, attitude, practice and challenges faced by operational health workers, administrators and parents. Based on findings of this phase, conclusion statements were developed and the Total Quality Management Technique (TQM) framework was further applied after inductive and deductive logical statements were drawn up based on the problems identified. Five objectives were developed through this method, this was followed by functional plans and tactical actions aimed at addressing the objectives. These tactical plans if accepted as good enough by the panelist selected for this second phase have the ability to reduce neonatal mortality rate through the adoption of early KMC strategies by saving preterm babies in Edo State in particular and globally (Bergh et al., 2012; UNICEF, 2008).

### 1.3 Summary of Phase One

This is the second of a two phase study aimed at developing strategies for the early implementation of KMC guidelines in health facilities in Edo State. The first phase investigated the knowledge, attitude, practice and challenges about KMC experienced by neonatal intensive care nurses and administrators, as well as the socio-cultural practices that hinder KMC uptake by mothers of preterm infants. Seventy-two (72) respondents that comprised of 30 neonatal intensive care unit nurses, 25 public health nurses, 4 administrators/managers and 13 mothers were explored using a multi-method approach.

The empirical findings are reported in the table below in the form of problem identified and concluding statements.

Table 1: Problem identified and conclusion statements

The knowledge, attitude and practice of operational health workers in Edo State, Nigeria regarding KMC guidelines; challenges and recommendations	Attitude of administrators towards the implementation of early KMC guidelines in health care facilities in Edo State; Challenges and recommendations	Effects of socio-cultural practices on KMC uptake by parents of preterm and LBW infants in Edo State
<ol style="list-style-type: none"> <li>1. There is shortage of nurses trained in neonatal care (4.2.1)</li> <li>2. Those who have work experience of 5-9yrs are constitute the majority (36%)</li> <li>3. There are OHW who are ignorant of the KMC policy (4.2.7)</li> <li>4. There is non-availability of KMC protocol and guidelines (4.2.7)</li> <li>5. NICU nurses are reluctant to initiate and practice KMC (4.3.3).</li> <li>6. There is a weak positive correlation between knowledge and attitude to</li> </ol>	<ol style="list-style-type: none"> <li>15. There is no agreement by administrators on how much relevant information on KMC should be given to parents</li> <li>16. Facilitating KMC is regarded as an added burden on the already heavy workload in the NICU (4.3.2)</li> <li>17. There is lack of sufficient fund to send staff for KMC training &amp; workshop (4.3.3)</li> <li>18. There is lack of funds</li> </ol>	<ol style="list-style-type: none"> <li>25. There is ignorance of KMC concept prior to admission in the unit. (See paragraph 4.8.3.2).</li> <li>26. Possibility to distort or give incorrect information about KMC from uninformed friends and relatives (See paragraph 4.8.3.2).</li> <li>27. KMC is perceived as part of African culture that is now given a new tag and concept to make it look like something alien. (See paragraph 4.8.5).</li> <li>28. Negative emotions as a result of KMC practice (See paragraph 4.8.5).</li> <li>29. KMC is perceived as an abnormality (See paragraph 4.8.6).</li> <li>30. There is resentment (See paragraph</li> </ol>

<p>KMC (4.2.5)</p> <p>7. Facilitating KMC is regarded as an added burden on the already heavy workload in the NICU (4.2.5).</p> <p>8. There is no participation in training programmes about KMC (4.2.6).</p> <p>9. There are no refresher programmes on KMC for staff (4.2.7).</p> <p>10. There is no supervision in KMC technique (4.2.6).</p> <p>11. There is lack of cooperation from managers (4.2.7)</p> <p>12. There is lack of space in NICU to implement KMC (4.3.3)</p> <p>13. There is lack of KMC materials and facilities (4.2.7)</p> <p>14. More training and awareness creation on KMC concept recommended (4.3.4)</p>	<p>to provide physical infrastructure in the hospital for enhanced KMC practice (4.3.3)</p> <p>19. Lack of human material and financial resources (5.2.3)</p> <p>20. Timely information recommended (5.3.4)</p> <p>21. Increase in human and material resources recommended (5.3.4)</p> <p>22. The provision of KMC guideline to get to the reach of all staff recommended (4.3.4)</p> <p>23. More training and awareness creation on KMC concept recommended</p>	<p>4.8.6).</p> <p>31. There is male superiority and dictates in family affairs including KMC. (See paragraph 4.8.6).</p> <p>32. KMC is perceived as an abnormality and not the accepted method of child care by core traditionalists and significant others. (See paragraph 4.8.6).</p> <p>33. Parents who practice KMC disregard tradition and elders' opinion (See paragraph 4.8.6).</p> <p>34. There are negative emotions of fatigue, irritability, frustration and stress (See paragraph 4.8.6).</p> <p>35. There are deterrents and discouragement due to gossips and misconceptions from friends and relatives, (See paragraph 4.8.6).</p> <p>36. There is resentment by core traditionalists. (See paragraph 4.8.6).</p> <p>37. There is deterrent due to nurses' poor attitude. (See paragraph 4.8.8).</p> <p>38. There is lack of privacy. (See paragraph 4.8.8).</p> <p>39. Inadequate time for practice. (See paragraph 4.8.8).</p> <p>40. Lack of human material and financial resources. (See paragraph 4.8.8).</p> <p>41. Despair and inadequate practice hours (See paragraph 4.8.8).</p> <p>42. Timely information recommended. (See paragraph 4.8.8).</p> <p>43. Increase in human and material and KMC dedicated centres recommended. (See paragraph 4.8.8).</p>
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Based on the aim of the study, strategic objectives that were determined in line with the vision, mission, values, principles and assumptions of the Federal Ministry of Health, National Association of Nigeria Nurses and Midwives and the University of Benin Teaching Hospital, a new vision and mission statement were coined by the researcher from the above institutions' strategy for operational health workers. These formed the basis for six (6) performance objectives of the TQM philosophy in conjunction with the forty-three (43) problems identified from the empirical research in phase one.

Identified problems were clustered together to develop five strategic objectives through deductive logic, to enhance the early implementation of KMC guidelines in Edo State, Nigeria. The strategic objectives were based on the Total Quality Management (TQM) philosophy with the goal of continuous improvement of the quality of nursing practice in Edo State in particular and Nigeria in general and a focus on total involvement, process improvement and customer focus (Peace & Robinson, 2000). The six principles of TQM are Leadership, Teamwork, Communication, Continuous improvement, Employee involvement, Education and training. These are labeled TQMe1-6 while the problem identified is depicted with the letter P.

<p><b>KEY:</b>  <b>PROBLEM IDENTIFIED</b>  (P)  P1-43 (See table 1)</p>	<p><b>KEY:</b>  <b>TOTAL QUALITY MANAGEMENT</b>  (TQMe)</p> <ol style="list-style-type: none"> <li>1. Leadership</li> <li>2. Team work</li> <li>3. Communication</li> <li>4. Continuous improvement</li> <li>5. Employee involvement</li> <li>6. Education and training</li> </ol>
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**Figure 1: Identified Problem and TQM philosophy**

## **2.0 Strategy Development**

The strategy to enhance the implementation of early KMC guidelines in healthcare facilities in Edo State, Nigeria was developed using a strategic process (as indicated in paragraph 4) to develop a vision and mission, identify values, principles and assumptions, and formulate strategic objectives and functional tactics, based on TOM philosophy. Each step of the strategic process that was followed in the development of the strategy to improve the implementation of early KMC guidelines in healthcare facilities in Edo State, Nigeria is discussed in this section

### **a. Vision**

Identification of the organization's vision and mission is the first step of any strategic planning process; therefore, developing a strategic vision is the first step in the strategic process as it provides the framework for strategic planning. A vision statement is an organizations inspiration and framework for its strategic planning (Ukpolo, 2006-2011). The author further asserts that the vision statement may apply to the entire organization or to a single unit of that organization or division (Tyler, 2009:13). The vision statement answers the questions: "What do we want to become?" or "Where do we want to go?" and focuses on what the organization's long-term direction should be, the technology-product-customer focus it intends to pursue, and its future scope.

The vision of the organization denotes the direction or purpose or dream and hopes of the organization and shapes the organization's identity. The vision of the organization serves as a "road map" or inspiration of the organization's desired future. To develop a vision and mission for operational health workers (OHW) in the NICU, the researcher viewed the three major stake holders in the provision of health services in the Edo State. These are the Federal Government of Nigeria as represented by the Federal Ministry of Health (FMOH), the



University of Benin Teaching Hospital (UBTH) and National Association of Nigeria Nurses and Midwives (NANNM).

The vision of the FMOH is: “To develop and implement policies that strengthen the national health system for effective, efficient, accessible and affordable delivery of health services in partnership with other stakeholders” (FMOH, 2011). This was again reversed in the national health policy draft of 2016 as “Universal health coverage (UHC) for all Nigerians” (FMOH, 2016).

The vision of UBTH is: “To be a major key player in health care delivery, research and training in Nigeria and Africa at large” ([Http://www.Ubth.Org/Main.Php?](http://www.Ubth.Org/Main.Php?))

The NANNM has its vision and mission stated together as: “To regulate the practice and activities of Nigerian Nurses and Midwives in the most efficient manner that safeguards best healthcare.

In the researchers’ bid to develop a strategy to enhance the implementation of early KMC guidelines in health care facilities in Edo State, the following vision was formulated for the operational health as deduced from the three stake holders vision stated above. The vision for operational health workers in Edo State Nigeria was developed from elements of each of the aforementioned stakeholders’ vision to include not only the health seekers but the health workers who provide service as well. This point is attested to from the research findings (refer to conclusion statements 3,4,5,7,8,9,11,12,14,27,28,29,38).

*Vision: “Provide quality KMC health care service for all based on excellence in nursing practice that is recognized nationally and internationally”*

#### **b. Mission**

A mission statement is an enduring statement of the unique purpose of an organization that distinguishes it from similar ones. It defines the broad purpose for which an organization

exists. (Pearce & Robinson, 2000:27). The mission identifies the present scope of the organization's operations in terms of its present capabilities, customer focus, activities, makeup, product, market, and technology. It provides answers to the questions: "Who are we?" and "What do we do?" A mission statement embodies the philosophy, values, identity, character and priorities of an organization, and also reflects the image the organization wants to project. A mission statement is not about measurable targets, but is rather a statement of intent, attitude, outlook and orientation (Ehlers & Lazenby, 2010; Pearce & Robinson, 2000). The mission statement of the FMOH is "To provide stake holders in health with a comprehensive framework for harnessing all resources for health development towards the achievement of Universal Health Coverage as the National Health Act in tandem with the Sustainable Development Goals (SDGs)"

The Mission statement of UBTH is: "To provide effective and efficient training of health professionals, quality research and equitable service delivery with empathy towards Our Clients"

As stated previously, NANNM has its vision and mission statement in one phrase. "To regulate **the** practice and activities **of** Nigerian Nurses and Midwives in the most efficient manner that safeguards best healthcare".

The mission statement highlights one of the aspects of awareness creation which is in partnership with other stakeholders. In this case, the emphasis is both on external and internal stakeholders (the OHW) who need to ensure the quality and efficiency of the health care services they provide to their clients (parents of preterm babies). It is assumed that that the FMOH has expressly included these in their mission statement; however, based on the research findings, the following mission statement was formulated (refer conclusion statements 16,17,18,19,20,21,22,23,24,26,27,29,36).

**Mission** *“To improve the health of neonates and all people in Nigeria through excellence in health practice and innovations to advance the nursing profession through dynamic quality driven nursing services that is nationally and internationally recognized for its effectiveness and efficiency; and provides benefits for all stake holders both internal and external”.*

### **c. Values**

Values are freely chosen, enduring beliefs or an attitude towards a person, object, idea or action, and represent a way of life, give direction to life, and form the basis of behaviour—especially behaviour that is based on decisions or choices (Kozier, Erb, Berman, & Burke, 2000:71). In an organization, values dictate the way that decisions are made and embody what the organization stands for. Values influence the policies, the type of competitive advantage sought, the organization structure, systems of management, the strategies and the functional tactics of the organization (Thompson & Strickland:53). It is therefore important to attempt to understand the values that are common to the health workers, the administrators and the parents of preterm infants within the health facilities in Edo State, Nigeria. The study has established that most of the values the participants hold with regard to KMC have a strong influence on policy implementation. In order to fulfill the vision and mission of the operational health workers, the following social values of the FMOH are central and drive this strategy:

- ❖ Right to the highest attainable level of health as a fundamental right of every Nigerian which includes access to timely, acceptable and affordable care of highest quality and international best practice.
- ❖ Maintenance of professional ethics through of human dignity and human right, confidentiality and cultural sensitivity.
- ❖ Shared responsibilities and mutual accountability of both the client and the provider in health promotion, health seeking and service provision

- ❖ Gender equity and responsiveness, culturally sensitive and social accountability to be taken into account by all actors in the health system.
- ❖ Sustainable political commitment to health through ensuring adequate resource allocation to health and commitment to national and international declarations
- ❖ Equity in access and use of health services

**Value statement:** “Maintenance of professional ethics by the operational health workers through of human dignity and human right, confidentiality and culturally sensitivity to gender and shared responsibility and commitment to international best practices for health.”

These values were subscribed to in the development of the vision, mission, strategy objectives and the functional tactics of the strategy to enhance early implementation strategy in health facilities in Edo State.

#### **d. Principles**

Principles refer to an accepted or fundamental basis of conduct, action or management for application in action ((Dictionary.com, 2004; Thesarus, 2002).

In order to ensure that the principles of the strategy to enhance early implementation of KMC guidelines in Edo State Nigeria are common and applicable to all health facilities tertiary/secondary,/PHCs/units in Edo State, Nigeria, the researcher applied the principles of the Federal Ministry of Health. These are highlighted in *the National health policy draft 2016: Promoting the health of Nigerians to accelerate socio-economic development* (FMOH, 2016:17) See paragraphs 3.4.2.

- ❖ PHC shall be the bed rock for national health system
- ❖ The attainment of universal coverage shall be the basic philosophy and strategy for national health development

- ❖ All health sectors shall ensure the use and provision of health services that are gender sensitive, evidence based, responsive, pro-poor and sustainable with a focus on outcome.
- ❖ Government shall ensure quality health care at all levels
- ❖ Government shall provide policy support and funding and take active measures to involve all private health sectors and other stake holders
- ❖ Promotion of inter-sectoral action for health and effective partnership among all relevant stake holders for health development by mainstreaming health in all policies
- ❖ Focus on the poor and vulnerable in all health interventions

The principles designed for the operational health workers therefore is coined from the above stated ones by the FMOH.

**Principles:** *Provision of health services to the parents of preterm infants that are gender sensitive, evidence based, responsive, pro-poor and sustainable with a focus on outcome”*

Table 3: Objectives of the KMC strategy

OBJECTIVE	PROBLEM IDENTIFIED/EVIDENCE
To improve the Knowledge, Attitude and Practice (KAP) of OHWs (OHW) in all health care facilities: private/public, Tertiary/2 <sup>nd</sup> /PHC/units in Edo State, Nigeria	Some OHW workers lack knowledge on some aspects of KMC which may affect their attitude to practice & thus serve as hindrances in KMC facilitation and practice (conclusion statements 3; 5; 6; 7; 8; 9; 10).
To negotiate improvement in human resources for nursing practice especially neonatal trained nurses in health care facilities private/public, Tertiary/2 <sup>nd</sup> /PHC/units in Edo State, Nigeria.	All the s in the study reported shortage of personnel as one of the major deterrent to KMC practice (Conclusion statements 14; 15; 40, 43).
To improve neonatal services through staff development and training development in an all-inclusive environment of decision making in health care facilities private/public, Tertiary/2 <sup>nd</sup> /PHC/units in Edo State, Nigeria	All respondents in the study reported dissatisfaction with the level of physical infrastructure and empowerment in terms of training (conclusion statement 1; 3; 5; 6; 8; 17; 37).
To improve infrastructure for both staff and parents of preterm infants in private/public, Tertiary/2 <sup>nd</sup> /PHC/units in Edo State, Nigeria.	All respondents in the study reported inadequate health care facilities practicing KMC and lack of infrastructure (conclusion statement 11; 18;23;24;38;43)
To reduce the effect of socio-cultural	An increased number of mothers of preterm

practices through the optimization of the information dissemination system to reduce misconceptions and create awareness of KMC in the communities, all health facilities: Private/Public, Tertiary/Secondary/PHCs/units in Edo State, Nigeria	infants lacked awareness of KMC concept prior to baby's hospitalization & reported deterrents to practice (conclusion statements 28;29;30;32;36)
To establish an enabling working environment that focuses on the needs of the OHW and parents of preterm babies in health care facilities: private/public, Tertiary/2 <sup>nd</sup> /PHC/units in Edo State, Nigeria.	An increased number of participants recommended the establishment of KMC dedicated facilities in the state and expressed lack of cooperation from managers and access to vital documents on KMC (conclusion statements 11;13;15; 24;39).

**f. Functional Plans and Tactics:** To achieve the stated objectives above, the researcher proposed functional plans and tactics as depicted in the table 3 below with the problem identified and the TQM principle involved in the action plan.

Table 4: Functional Plan and Tactics

KEY: P= PROBLEM IDENTIFIED 1-39

TQM= Total quality principle 1=6

STRATEGIC OBJECTIVES	FUNCTIONAL PLAN	TACTICS
1.To improve the knowledge, attitude and practice (KAP) of OHW	<p>1.1 Health facilities, tertiary/secondary/PHCs/units' vision, mission, goals; and objectives must be aligned with health services and contribute to the goals and strategic directions of nursing practice in general 3; (P; 3,6,9;10;17. TQM; 1.4,6)</p> <p>1.2 Health facilities, tertiary/secondary/PHCs/units' must build on the strengths and resources of the health personnel and institutions in order to maximise its full potential. (P1;2,3; TQM;1,3,4;5)</p>	<p>Annual review of objectives in the form of seminars and workshop presentations on the trends and current practices on neonatal mortality reduction.</p> <p>Orientation document to be prepared for new staff and made available free of charge on first day at work.</p> <p>Quarterly seminar and study day for OHW and</p>

	<p>1.3 Health facilities, tertiary/secondary/PHCs/units should independently develop strategies and standards for OHW based on their environment and particular context. (P14,15,16,17,18,19,20: TQM;1,3,5,6)</p>	<p>nurse facilitators encouraged to give presentation.</p>
<p>2. To negotiate improvement in the human resources base for nursing practice, especially neonatal trained nurses</p>	<p>2.1 Increase government and public awareness of personnel shortage in clinical nursing practice, especially (neonatal nurses) in health facilities, tertiary/ secondary/ PHCs/ units (P7,8,12,13; TQM. 1,2,4,5)</p> <p>2.2 Advocate for the development and implementation of workforce planning for health workers (OHW) at health facilities, tertiary/secondary/PHCs/ units that consider both current need and future demand for health workers in Edo State (P 3,4,7,8,9,27; TQM,1,2,4,5)</p> <p>2.2 Develop position statements to highlight the OHW shortage issues, factors contributing to shortage and strategies to expand the current and future pool of nurses in clinical practice. (P7,8,27,29,31,34; TQM;1,4,5)</p> <p>2.3 Increase the pool of potential OHW at health facilities, tertiary/secondary/PHCs/units. (P;7,27.29,31,33; (TQM 2,4,6)</p> <p>2.3.1 Create personnel scholarships for post basic nursing for those who would like to pursue a career in neonatal nursing, so they can pursue full time study. (7,27.29,31,33; TQM;2;4;6)</p> <p>2.3.2 Arrange workshops and in-service training of the FMOH current best practices in healthcare delivery. (P 27,33,34: TQM 2,6)</p>	<p>Encourage management to improve manpower supply by continued evidence-based position paper and lobbying through NANNM and facility pressure groups like staff associations and union to highlight effect of manpower shortage on staff and clients.</p> <p>Publish and display line of progression of the nurses in clinical practice and other areas of specialty in neonatal care to increase interest</p> <p>Encourage nurses in the neonatal unit to develop an interest in neonatal nursing by sending OHW on study leave with pay.</p> <p>Nurses trained in neonatology should remain in dedicated units and not be transferred to other units in the facility</p> <p>Annual prize and incentive for best patient-friendly nurse</p> <p>Institute an annual award plaque and monetary incentive backed by</p>

		<p>scholarship for best neonatal nurse in the nursing and midwifery schools</p> <p>OHW to register with professional body and attend at least one sponsored workshop annually as a pre-requisite for promotion.</p>
<p>3. To optimise the dissemination of the information system in coordination and awareness creation of KMC in all health facilities. tertiary/secondary/P HCs/units</p>	<p>3.1 Create an administrative clinical nursing programme coordinator post to maintain a complete recordkeeping system of neonatal practices and trends to enable appropriate, regular and coordinated communication amongst staff in all health facilities. (P;11,14, 24; TQM; 1,4,6)</p> <p>3.1.2 Publish the FMOH policies and documentation relevant to health services and practice so the expectations and requirements of the nursing practice in the institutions and units are clear and explicit. (P2,3,4,7;TQM; 1,2,5)</p> <p>3.2 Develop and implement health information /education programmes in the ANC (P13,32; TQM, 2,3)</p> <p>3.2.1 Create administrative liaison clinical personnel to publish information about KMC in print and electronic media. (P35) TQM 1,4)</p> <p>3.2.2 Organise mothers who have practiced KMC successfully into a body and use them as mentors to upscale uptake. (13,14,15,16,18,19,20,35: TQM;1, 2,3,4)</p>	<p>Use of information communication technology to enhance communication in the health sector e.g. E-mails, SMS Skype, WhatsApp group chats etc. as frequently as possible-weekly</p> <p>Display the KMC policy guide on all notice boards in health facilities and units.</p> <p>Publish and disseminate KMC guidelines to all staff in neonatal and midwifery units in the form of handbook free of charge</p> <p>At least monthly visit by a facilitator from the in-service education unit of the tertiary health facility to provide on-the-spot assistance to nurses and mothers of preterm babies at the secondary, PHCs /unit who need help with facilitation.</p> <p>Encourage and assist mothers of preterm babies to form a group known as “born- too-soon mums” to attend quarterly presentations held by nurses and share their experiences.</p>



<p>4. To expand nursing services, development and innovation in nursing practice</p>	<p>4.1 Develop and implement best practices for expanding the current and future pool of OHW in clinical practice. (P9,10,11,13: TQM1,3)</p> <p>4.1.2 Market KMC as a preferred mother-child care practice and highlight the attractiveness of a career in neonatal nursing and research, to recruit more nurses to the clinical areas. (3,5,12,13,14,27,33: TQM 2,3)</p> <p>4.1.3 Fast-track post-basic nursing by building bridges between general nursing, midwifery and degree in nursing. (P3, 27,28,30,31:TQM 2,4 )</p> <p>4.4 Create an administrative KMC cocoordinator to ensure that all administrative processes with regard to KMC facilitation (e.g. yearly neonatal births, neonatal mortality, yearly number of neonates who received KMC, other) are conducted and regular communication is provided to CMDs and all OHWs. (P;11, 14,15; TQM; 1,4, 5)</p> <p>4.4.1 Advocate for setting up of more KMC dedicated facilities in the Edo State. (P23, 30,31,33, 36, 37: TQM1,3,6)</p>	<p>Tertiary hospitals to serve as staff and information pull for KMC</p> <p>Leadership and KMC training programmes to be organised and taken to the doorstep of secondary and PHCs facilities bi-annually</p> <p>Local community chiefs and women leaders to be invited to workshops and seminars on KMC and use such fora to correct misconceptions bi-annually.</p> <p>Set meeting days to discuss empowerment of nurses on KMC in health facilities and not limit such meetings to the tertiary healthcare facilities alone (take such meetings to the doorstep of all units, PHCs, secondary facilities at least quarterly)</p> <p>Create and train KMC administrators/facilitators for each of the three senatorial districts to monitor the attendant PHCs in the districts at least bi-monthly for empowering and encouraging nurses and mothers on KMC.</p>
<p>5. To establish an enabling working environment that focuses on the</p>	<p>5.1 Create positive work environments for OHW at health facilities, tertiary/secondary/PHCs/units. (P</p>	<p>At least monthly visit by a facilitator from the in-service education unit of</p>

<p>needs of OHW and parents of preterm babies.</p>	<p>4,6,7: TQM1,4)</p> <p>5.1.1 Evaluate the job satisfaction of OHW and develop strategies to improve the work environment (P 4,6,7: TQM1,4)</p> <p>5.1.2 Develop supervision and mentorship capacity among clinical personnel. (P10,11: TQM1,2,4)</p> <p>5.1.3 Display the Approved KMC protocol in conspicuous areas accessible to all staff and parents of preterm infants (P,11, 3,34: TQM;2,4,5)</p> <p>Orientate newly admitted mothers of preterm babies to mothers who have successfully benefited from KMC</p> <p>5.2 Orientate newly employed staff to the work/hospital environs and support structures such as staff clinics, staff schools for children, study, day and in-service programmes. (1,4,6: TQM;1,4)</p> <p>5.3 Provide a well-equipped and dedicated room for KMC facilitation. (P21,22,29: TQM1,4.5)</p> <p>5.3.1 Provide well-furnished and equipped in-dwelling rooms for mothers of preterm babies. (P 21,22,29:TQM 1,4)</p>	<p>the tertiary health facility to visit and provide on-the-spot assistance to nurses and mothers of preterm babies at the secondary, PHCs /units who need help with facilitation.</p> <p>The servicom facility already in place in the tertiary health facility which enables patients to report complaints about staff to be extended to staff to complain and report improper treatment and uncooperative stance by managers too.</p> <p>Do a guided and familiarisation tour of facilities and orientation of mothers of newly admitted babies; introduce mother to other mothers within six hours of admission</p> <p>Leadership training and delegation of duties with corresponding authority to enable skill development within 12 months of working in the NICU</p>
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## **Appendix 16: STRATEGIC DOCUMENT**



### **STRATEGIC DOCUMENT FOR THE EARLY IMPLEMENTATION OF KANGAROO MOTHER CARE GUIDELINES IN HEALTH FACILITIES IN EDO STATE, NIGERIA**

#### **PREFACE**

The Kangaroo mother care (KMC) implementation strategic document 2017 was developed by Roselynd Ejakhianghe Esewe as a Doctoral Dissertation in nursing school of nursing, faculty of community and health sciences, University of the Western Cape, Bellville, South Africa, subsequent upon been refined and authenticated by Delphi panellists comprising 10 experts in neonatal care, obstetrics and gynaecology, management and nursing education.

The researcher conducted an empirical study to identify problems through the use of the Health Policy Analysis Triangle of Walt and Gilson, (1994) to investigate the internal (health workers in the neonatal unit,, public health unit and some key administrators /managers; preterm babies (some mothers of preterm and low birth weight infants) regarding content, context and process of KMC uptake.

The final draft was submitted to the experts and the project supervisor Prof. D. R. Phetlhu for authentication, applicability and usability.

I thank most sincerely the nurses in the SCBU, the public health unit, the ADNS, the DNS, Edo State ministry of health, the mothers of the preterm babies who participated in this study as well as other Delphi panellist and experts who spared their precious time to participate and ensure a document such as this was produced.

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## **1. PURPOSE OF THE DOCUMENT**

This document arose out of a need to have a workable material for use in healthcare facilities in Edo State based on the problems of none availability and implementation of a document on Kangaroo Mother Care (KMC). KMC do not require any high tech-materials and it can be practiced in any context. If successfully implemented, it has the ability to reduce neonatal mortality rate, especially in low-resource countries like Nigeria (Bergh et al., 2011). It was painstakingly created by the author as part of her PHD Dissertation in Nursing for the University of the Western Cape, South Africa.

### **1.1 Basis for Strategy Development**

Having a strategy in place guarantees more beneficial service outcomes than traditional and institutional long range planning which in most cases is well-suited in generating insights and relationships that produce value creation and sustained programme accomplishment and service delivery (SUNO, 2010).

Accordingly, some of the benefits of having a strategic formulation are;

- Strategy formulation activities aid the organization's ability to prevent problems because of the involvement of all stake holders during the planning process.
- Group-based strategic decisions are likely to be drawn from best available alternatives.
- Gaps and overlaps in activity amongst groups and individuals are reduced as participation helps to clarify differences in roles (Bryson, 1988).

It is for these reasons that the researcher chose to develop a strategy to enhance the early implementation of KMC guidelines in health facilities in Edo State, Nigeria by the application of the health policy analysis triangle of Walt and Gilson (1994), to explore the actors (nurses and midwives in the neonatal intensive care unit, public health unit, nurse

administrators, hospital chief executive and some mothers of preterm infants) regarding their knowledge of the KMC guidelines (content), how the guideline is been implemented (process) and the circumstances or cultural issues regarding different aspects from different actors (context). The strategy was formulated from the conclusion statements that were generated from the empirical study by the application of Bryson (1988) strategic development process to develop a vision and mission statement, identify values, principles and assumptions and formulate strategic objectives and functional tactics based on the total quality management philosophy (Tenner & DeTorro, 1992). Each step of the strategic process was followed in the development of the strategy to enhance early KMC implementation guidelines in Edo State

The strategic objectives were based on Total Quality Management (TQM) philosophy with the goal of continuous improvement of the quality of nursing practice in Edo State in particular and Nigeria in general and a focus on total involvement, process improvement and customer focus (Peace & Robinson, 2000). The six principles of TQM are leadership, teamwork, communication, continuous improvement, employee involvement, education and training. These are labeled TQMe1-6 while the problem identified is depicted with the letter P.

<p>KEY:          PROBLEM IDENTIFIED          (P)          P1-43</p>	<p>KEY:          TOTAL QUALITY          MANAGEMENT          (TQMe)          1. Leadership          2. Team work          3. Communication          4. Continuous improvement          5. Employee involvement          6. Education and training</p>
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**Figure 1: Showing TQM elements and Problem identified**



## **2. THE KANGAROO MOTHER CARE IMPLEMENTATION STRATEGY**

### **A. INTRODUCTION**

The mission, vision, and core values of the operational health workers, administrators and parents of preterm infants provide the foundation upon which this strategic plan was developed.

**Mission:** *“To reduce neonatal mortality rate through effective, efficient and dynamic global nursing practice by the operational health workers, the administrators.*

Health workers in the neonatal environment, the administrators and parents of preterm provide sound efficient services that reduce the mortality rate inherent in the preterm infant to the barest minimum. The tertiary health facility provides and receives referred preterm from across other health care facilities in the state and beyond being recognised as a centre for excellence.

**Vision:** *“To provide kangaroo care to preterm infants through facilitation by their parents that will enable transformation of better skills from operational health care workers to improve the knowledge of parents of preterm and LBW infants in neonatal care through excellence in nursing practice to reduce neonatal mortality globally’.*

#### **Core Values:**

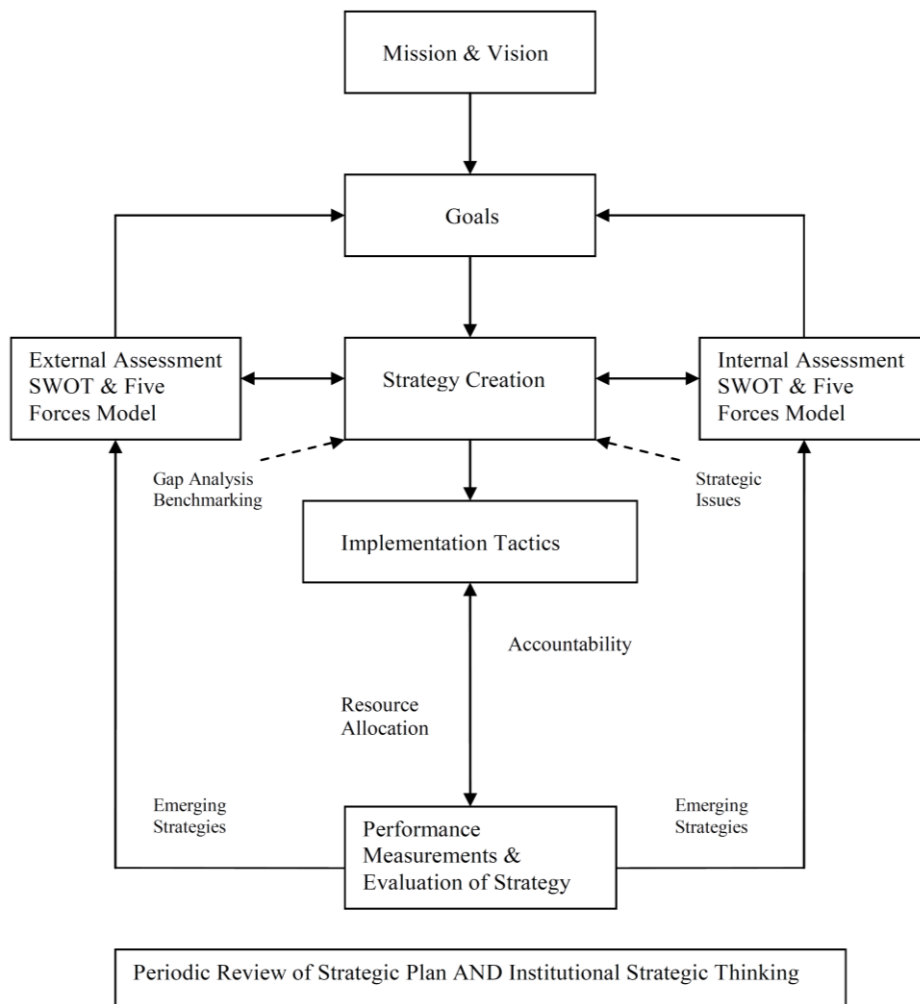
- ❖ “Maintenance of professional ethics”
- ❖ “Cultural sensitivity to gender, shared responsibility and commitment to international best practices for health”.

## **B. INSTITUTIONAL BACKGROUND**

The context of this study was a Federal government tertiary health institution, -University of Benin Teaching Hospital. It is located in the state capital in the Ovia North East LGA, and bounded by the University of Benin on the south, Federal Girls Grammar School on the East and the Benin Property Development Company (BDPA) on the North. It was established in 1974 alongside the University of Benin to serve as a training ground for the medical doctors. The hospital has a bed capacity of 720 with multiple units and departments such as institute of child health, paediatrics, Obstetrics & Gynaecology and neurology units to mention but a few. The neonatal intensive care unit is one of such units with its unique services to preterm infants and low birth weight babies. This account for the institution having a mix of diverse groups of health-care professionals, allied health workers and auxiliary staff.

The available records of the number of preterm births in UBTH in 2015 was 424, the neonatal mortality was 179 while the number of mothers that practiced KMC was 180 (2015-2016 ward register /records). The NICU popularly called Special Care Baby Unit (SCBU) has twenty-two incubators and twenty cots coupled with various forms of resuscitators and facilities for neonatal care. This unit was accredited as a KMC centre in 2005 by the WHO and thus serves as referral centre to the hospitals in the state and neighbouring states like Kogi and Delta. Thus it was not necessary to do an analysis of strength, weakness, opportunities and treats (SWORT) to KMC uptake in the health facility in the study.

## KMC STRATEGY PROCESS



Source: Southern University at New Orleans (SUNO, 2011:13).

### C. PLANNING CONTEXT

The researcher conducted an assessment of strengths, weakness, opportunities and threats (SWOT) to KMC uptake by the application of the health policy analysis triangle of Walt and Gilson (1994) to explore the actors (operational health workers, administrators and parents of preterm infants ) regarding the objectives of the study that explored the content of the KMC guideline and the knowledge possessed by the workers, the process of its implementation and the context which investigated the socio-cultural practices that impinge on KMC uptake.

These actors are viewed as both internal and external customers because health workers who provide services to other units are regarded as external to such units (Peace & Robinson, 2000). The reason was to have a baseline information about the current issues surrounding KMC concept.

The university of Benin Teaching Hospital strength lies in it been a tertiary health institution with high level of specialized personnel. Furthermore, it is Federal government facility centrally located in the south-south zone of the country and receives funding directly from the Federal Ministry of health thus making its services to be affordable when compared to the private health establishment.

#### **D. ASSUMPTIONS**

The strategy is influenced by the following assumptions:

- 1). The strategy is developed for use within the health services context of Edo State, Nigeria.
- 2). In order to enhance the early implementation of KMC guidelines in Edo State, Nigeria, the strategy must be interpreted in terms of the philosophy of TQM, which is centred on the theoretical foundations of systems theory, variation (statistical theory), theory of knowledge and theory of psychology; although these theories are not pertinently subscribed to in this strategy.

In this study, TQM is based on three fundamental principles that encompass its overall concept and, if they are efficiently administered, will promote the continuous improvement of all health facilities whether private or public Tertiary/Secondary/PHCs/units. The three fundamental principles of TQM are: focus on the customers, internal and external (operational health workers, administrators and parents of preterm/ low birth weight infants and other members of the health team and the public); process improvement and total involvement with six supporting elements of leadership, education and training, supportive structure, communications, and reward.

3). In this strategy the customer focus is applied to internal customers which are the operational health workers and administrators, other members of the health team and external customers -the parents of the preterm babies and the society-at-large.

4). The strategy is viewed as "living" because nursing practice is dynamic and rapidly evolving, which influences, and to some degree constrains the quality of nursing practice in Nigeria. As a result, health facilities; Tertiary/2<sup>nd</sup> /PHCs/units must continually assess the quality of nursing practice by using the Federal ministry of health criteria with regard to the nature of its mission aimed at the knowledge, practice and attitude of health workers geared towards a comprehensive framework for harnessing all resources for health development towards the achievement of Universal Health Coverage as explained in the National Health Act in tandem with the Sustainable Development Goals (SDGs, 2020). This is necessary in order to change, revise and renew the strategy and measurement objectives and functional tactics to continuously enhance the early implementation of KMC guidelines in Edo State, Nigeria.

5). The vision of the strategy gives rise to the mission, and both of these are driven by the values, principles and assumptions of the strategy are based on the philosophy of TQM. Therefore, to change, revise or renew the strategy objectives and functional tactics of the strategy all these fundamentals must be considered and subscribed to.

#### **E. STRATEGIC PLANNING APPROACH**

The strategy was developed by the researcher in line with total quality management principles and its authenticity was assured by experts through the Delphi process.

### **3. STRATEGY GOALS**

Develop strategy aimed to enhance early implementation of KMC guidelines in health facilities in Edo State, Nigeria.

### **4. STRATEGY OBJECTIVES**

1. To improve the Knowledge, Attitude and Practice (KAP) of operational health workers in all health care facilities: private/public, Tertiary/2<sup>nd</sup>/PHC/units in Edo State, Nigeria
2. To negotiate improvement in human resources for nursing practice especially neonatal trained nurses in health care facilities private/public, Tertiary/2<sup>nd</sup>/PHC/units in Edo State, Nigeria.
3. To improve neonatal services through staff development and training development in an all-inclusive environment of decision making in health care facilities private/public, Tertiary/2<sup>nd</sup>/PHC/units in Edo State, Nigeria.
4. To improve infrastructure for both staff and parents of preterm infants in private/public, Tertiary/2<sup>nd</sup>/PHC/units in Edo State, Nigeria.
5. To reduce the effect of socio-cultural practices through the optimization of the information dissemination system to reduce misconceptions and create awareness of KMC in the communities, all health facilities: Private/Public, Tertiary/Secondary/PHCs/units in Edo State, Nigeria.
6. To establish an enabling working environment that focuses on the needs of the operational health workers and parents of preterm babies in health care facilities: private/public, Tertiary/2<sup>nd</sup>/PHC/units in Edo State, Nigeria.

**Objective 1.1:** To improve the Knowledge, Attitude and Practice (KAP) of operational health workers in all health care facilities: private/public, Tertiary/2<sup>nd</sup>/PHC/units in Edo State, Nigeria.

### **Strategies for Objective 1.1**

- ❖ The health facilities: Private/Public/Tertiary/Secondary/PHCs/units' vision, mission, goals; and objectives must be aligned with health services and contribute to the goals and strategic directions of nursing practice in general
- ❖ The health facilities: Private/Public/Tertiary/Secondary/PHCs/units' must build on the strengths and resources of the health personnel and institutions in order to maximize its full potentials
- ❖ The health facilities, Private/Public /Tertiary/Secondary/PHCs/units should independently develop strategies and standards for OHW based on their environment and peculiar context.

### **5. Performance Measure /Tactics:**

- ❖ Annual review of objectives in forms of seminars and workshop presentations on the trends and current practices on neonatal mortality reduction.
- ❖ Orientation document to be prepared for new staff and made available free of charge on first day at work.
- ❖ Quarterly seminar and study day for operational health workers. Nurse facilitators encouraged to give presentations.
- ❖ Train the trainers' workshop to increase manpower and practice of KMC bi-annually.

**Objective 2.1:** To negotiate improvement in human resources for nursing practice especially neonatal trained nurses in health care facilities private/public, Tertiary/2nd/PHC/units in Edo State, Nigeria.

### **Strategies for Objective**

- ❖ Draw the government and public awareness of personnel shortage in clinical nursing practice especially (neonatal nurses) in health facilities/Tertiary/ Secondary/ PHCs/ Units.
- ❖ Develop position paper and statements that highlight the operational health workers shortage issues, factors contributing to shortage and strategies to expand the current and future pool of nurses in clinical practice
- ❖ Advocate for the development and implementation of workforce planning for health workers (OHW) at all health facilities; Private, public/Tertiary/Secondary/PHCs/ Units which highlights both current need and future demand for health workers in Edo State.
- ❖ Increase the pool of potential operational health workers at all health facilities; private/public/Tertiary/Secondary/PHCs/Units.
- ❖ Create personnel scholarships for post basic nursing for those who would like to pursue a career in neonatal nursing, so they can pursue full time study.
- ❖ Arrange workshops and in-service training of the FMOH current best practices in health care delivery.

### **Performance Measure /Tactics:**

- ❖ Encourage management to improve manpower supply by continued evidence based position paper and lobbying through National Association of Nigeria Nurses and Midwives.(NANNM) and facility pressure groups like staff associations and workers union to highlight effect of manpower shortage on the staff and clients.
- ❖ Publish and display line of progression of the nurses in clinical practice and other areas of specialty in neonatal care to increase interest.



- ❖ Encourage nurses in the nursing and midwifery schools to develop interest in neonatal nursing by sending OHW on study leave with pay; organize seminars and talk shows in the schools to increase interest in practice.
- ❖ Nurses trained in neonatology should remain in dedicated units and not transferred to other units in the facility.
- ❖ Annual prize and incentive for best patient-friendly nurse
- ❖ Institute an annual award plaque and monetary incentive backed by scholarship for best neonatal nurse in the nursing and midwifery schools.
- ❖ OHW to register with professional body and attend at least one sponsored workshop annually as a pre-requisite for promotion to the next level

**Objective 3.1:** To improve neonatal services through staff development and training development in an all-inclusive environment of decision making in health care facilities private/public, Tertiary/2<sup>nd</sup>/PHC/units in Edo State, Nigeria.

#### **Strategies for Objective**

- ❖ Create an administrative clinical nursing programme coordinator post to maintain a complete record keeping system of neonatal practices and trends to enable appropriate, regular and coordinated communication amongst staff in all the health facilities.
- ❖ Publish the FMOH policies and document which are relevant to health services and practice so that expectations and requirements of the nursing practice in the institution and unit are clear and explicit.
- ❖ Develop and implement health information /education programmes in the ANC.
- ❖ Create administrative liaison clinical personnel to publish information about KMC in print and electronic media.

- ❖ Organise mothers who have practiced KMC successfully into a body and use them as mentors to upscale uptake.

### **Performance Measure/Tactics**

- ❖ Display the KMC policy guide documents in all notice boards in the health facilities, and units.
- ❖ Publish and disseminate the KMC guidelines to all staff in neonatal and midwifery units in form of hand book free of charge
- ❖ At least monthly visit by a facilitator from the in-service education unit of the tertiary health facility to visit and provide on the spot assistance to nurses and mothers of preterm babies at the Private/Public/Tertiary /Secondary, PHCs /unit who need help with facilitation
- ❖ Encourage and assist mothers of preterm babies to form a group known as “born too soon mums” to attend presentations held by nurses and share their experiences quarterly.
- ❖ Create interdisciplinary and intersectorial teams comprising doctors, community health workers) and multi sectoral collaboration (Health, Agriculture, Gender, and relevant developmental partners) to collaborate and form a cohesive force in a holistic approach to maternal and neonatal health. Bi-annual meetings to discuss challenges and progress. Team to be chaired by the minister for health.

**Objective 4.1:** To improve infrastructure for both staff and parents of preterm infants in private/public, Tertiary/2<sup>nd</sup>/PHC/units in Edo State, Nigeria

### **Strategies for Objective 4.1**

- ❖ Draw the government and public awareness to shortage of infrastructure and need for more neonatal care centres in the state through management and position paper highlighting absenteeism probably due to overwork by nurses organization and staff welfare association.

### **Performance Measures /Tactics**

- ❖ Develop position paper to paper to highlight international standard of best practice of nurse/ patient ratio.
- ❖ Use key nurse members and persons sympathetic to nursing issues to reach the legislative bodies to enable increase in annual health budget health.

**Objective 5.1:** To reduce the effect of socio-cultural practices through the optimization of the information dissemination system to reduce misconceptions and create awareness of KMC in the communities, all health facilities: Private/Public, Tertiary/Secondary/PHCs/units in Edo State, Nigeria.

### **Strategies for Objective 5.1**

- ❖ Reduce misconceptions and create awareness of KMC in the communities through gate keepers
- ❖ Develop and implement best practices for expanding the current and future pool of in clinical practice.
- ❖ Market KMC as a preferred mother-child care practice and highlight the attractiveness of a career in neonatal nursing and research, to recruit more nurses to the clinical areas.

- ❖ Advocate for the setting up of more KMC dedicated facilities in the Edo State through professional bodies (NANNM) and other legislative lobbying for improved funding of neonatal care

### **Performance Measure /Tactics**

- ❖ Invite women leaders, chiefs and other community gate keepers to seminars and workshops on KMC quarterly and the annual KMC day.
- ❖ Use of radio and TV jingles and play to showcase the positive effect of KMC.
- ❖ Use of ICT to enhance communication in the health sector e.g. E-mails, SMS Skype, WhatsApp group chat etc. as frequently as possible-weekly Tertiary hospitals to serve as staff and information pull for KMC.
- ❖ Leadership and KMC training programmes to be organized and taken to the door steps of the secondary and PHCs facilities bi-annually.
- ❖ Break the walls of discrimination by forming partnership with private hospitals and hold joint seminars and meetings quarterly.
- ❖ Local community chiefs and women leaders to be invited to workshops and seminars on KMC biannually and use such forum to correct misconceptions.

**Objective 6.1:** To establish an enabling working environment that focuses on the needs of the operational health workers and parents of preterm babies in health care facilities: private/public, Tertiary/2<sup>nd</sup>/PHC/units in Edo State, Nigeria.

### **Strategies for Objective 6.1**

- ❖ Fast-track post-basic nursing by building bridges between general nursing, midwifery and degree in nursing

- ❖ Create an administrative KMC co-coordinator to ensure that all administrative processes with regard to KMC facilitation (e.g. yearly neonatal births, neonatal mortality, yearly number of neonates who received KMC, other) are conducted and regular statistics is made available to end users e. to operational health workers, Chief Medical Director and policy makers.
- ❖ Create positive work environments for operational health workers at health facilities/Tertiary/Secondary/PHCs/ Units
- ❖ Evaluate the job satisfaction of operational health workers and develop strategies to improve the work environment.
- ❖ Develop supervision and mentorship capacity among clinical personnel.
- ❖ Display the Approved KMC protocol in conspicuous areas accessible to all staff and parents of preterm infants
- ❖ Orientate and introduce newly admitted mothers of preterm babies to mothers who have successfully benefitted from KMC.
- ❖ Orientate newly employed staff to the work/hospital environs and support structures such as staff clinics, staff schools for children study day and in-service programmes,
- ❖ Provide a well-equipped and dedicated room for KMC facilitation
- ❖ Provide well-furnished and equipped in-dwelling rooms for mothers of preterm babies

### **Performance Measure/ Tactics**

- ❖ Set meeting days to discuss empowerment of nurses on KMC in health facilities and not limit such meetings to the tertiary health care facilities alone (take such meetings to the doorsteps of all units, PHCs, secondary, private facilities at least quarterly).

- ❖ Create and train KMC administrators/ facilitators for each of the three senatorial districts to monitor the attendant PHCs in the districts at least twice monthly for empowerment and encourage nurses and mothers on KMC.
- ❖ At least monthly visit by a facilitator from the in-service education unit of the tertiary health facility to visit and provide on the spot assistance to nurses and mothers of preterm babies at the secondary, PHCs /unit who need help with facilitation.
- ❖ The servicom facility already in place in the tertiary health facility which enables patients to report complaints about staff to be extended to staff to as an avenue to anonymously complain and report improper treatment and uncooperative stance by managers *daily*.
- ❖ Do a guided and familiarization tour of facilities and orientation of mothers during ANC *at least once* before 28weeks gestation; newly admitted mothers of preterm babies to be introduced to other mothers practicing KMC *within 6 hours* of admission to reduce psychological trauma.
- ❖ Leadership training and delegation of duties with corresponding authority to enable skill development within 12months of working in the NICU.

## **6. ACTION PLAN**

Successful implementation is accomplished by turning strategic plans into action plans that are executed at the unit level. The action plans must address key strategic goals through practical steps, measure progress over time, assure that people have the resources they need, and keep everything on track. An action plan is where strategic planning and implementation overlap. It is where mid-level managers can really make important and visible contributions to organizational success. An action plan is a document that begins with strategic goals and identifies all the steps required to achieve them.

An organization's mission and strategic goals are the natural starting point for institutional- and unit-level goals. Individual units take strategic goals and transform them into unit goals with clear targets and performance measures. The institution's highest strategic goals narrow down to the units, which devise own goals and plans to attain objectives. Top management must examine unit goals to assure itself that they:

- ❖ Support and are compatible with the organizations' strategy.
- ❖ Add up to a complete plan for achieve the organizations' strategic goals.
- ❖ Management must be alert for unit goals that are in conflict with those of the organization or those of other units.
- ❖ Management must ensure that all of the initiatives required to achieve organizational goals are covered within the collective unit plans.

Once goals are settled, and a plan to reach them, the unit must find ways to measure its performance in terms of those goals. The measures of performance should be relevant and clear. Performance measure should also address factors that one can actually be achieved with the resources available. There are many systems for measuring performance. The author asserts this is beyond the scope of this study and recommends this as a postdoctoral work.

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### Appendix 1: Worksheet for Conducting SWOT Analysis

Worksheet for Conducting a SWOT Analysis		Date of Analysis
_____ What is being analyzed:  _____ (Ex. Enrollment)		
<b>Internal Analysis</b> List factors inherent to what is being analyzed.		
Strengths	Ideas for building on these strengths	
Weaknesses	Ideas for reducing these weaknesses	
<b>External Analysis</b> List factors external to what is being analyzed, such as customer needs or marketplace trends.		
Opportunities	Ideas for investigating or taking advantage of these opportunities	
Threats	Ideas for minimizing or overcoming these threats	

Source: Harvard Business Essentials, “Strategy – Create and Implement the Best Strategy for your Business” training tools. IN (Strategic Planning Handbook and Managers Implementation Tools: New Orleans. Academic Year 2006-2011)

## Appendix 2: Work Breakdown Structure

Develop a Work Breakdown Structure (WBS) to ensure that you do not overlook a significant part of a complex activity or underestimate the time and money needed to complete the work. Use multiple pages as needed. Describe the overall project:			
Major Task	Level 1	Level 2 Subtasks	Level 2 Subtask Duration
Total duration (hours/days/weeks)			
Major Task	Level 1 Subtasks	Level 2 Subtasks	Level 2 Subtask Duration
Total duration (hours/days/weeks)			

**Appendix 3: Worksheet for Work Breakdown Structure**

UNIT IDENTIFICATION: \_\_\_\_\_

STRATEGIC GOAL: \_\_\_\_\_

OBJECTIVE: \_\_\_\_\_

NOTE: For each Action Step, indicate the tangible results, person/department responsible, costs and time-line. STRATEGY	Activity or Action Steps	Performance Measures or Tangible Results	Person or Department Responsible	Timeframe for Implementation	Cost

Source: Harvard Business Essentials, “Strategy – Create and Implement the Best Strategy for your Business” training tools. In (Strategic Planning Handbook and Managers Implementation Tools: Southern University At New Orleans. Academic Year 2006-2011).

KMC guidelines in health facilities in Edo State, Nigeria and the creation of the strategic document.