International Journal of Nursing and Health Science
2020; 7(1): 46-55
http://www.openscienceonline.com/journal/ijnhs
ISSN: 2381-4861 (Print); ISSN: 2381-4888 (Online)

Open Science

Strategies to Enhance Early Implementation of Kangaroo Mother Care Guidelines in Health Facilities in Edo State, Nigeria

Roselynd Ejakhianghe Esewe[1, *], Rene Deliwe Phetlhu[2]

[1]Nursing Science Department, School of Basic Medical Sciences, University of Benin, Benin City, Nigeria

[2]School of Nursing, Faculty of Community and Health Sciences, University of the Western Cape, Cape Town, Republic of South Africa

Email address

roseline.esewe@uniben.edu (R. E. Esewe)

[*]Corresponding author

To cite this article

Roselynd Ejakhianghe Esewe, Rene Deliwe Phetlhu. Strategies to Enhance Early Implementation of Kangaroo Mother Care Guidelines in Health Facilities in Edo State, Nigeria. *International Journal of Nursing and Health Science*. Vol. 7, No. 1, 2020, pp. 46-55.

Received: December 10, 2019; **Accepted**: February 12, 2020; **Published**: February 14, 2020

Abstract

This paper describes the second phase of the processes that culminated in the formulation of strategies to enhance early implementation of Kangaroo Mother Care (KMC) guidelines in health facilities in Edo state, Nigeria. A multi-method approach by the use of the health policy analysis triangle of Walt and Gilson in 1994 resulted in conclusion statements that were generated from an empirical study in phase 1. The knowledge, attitude, practice and socio-cultural barriers regarding KMC of 72 respondents: 55 operational health workers, 4 managers and 13 mothers of preterm infants was explored through a descriptive survey design. In phase II, a purposive method was applied to select 10 Delphi panelists. The Total Quality Management (TQM) philosophy served as a basis to develop a vision, mission, values, principles, assumptions, and strategic objectives. The quantitative Delphi approach was used with the aid of a self-administered questionnaire which was validated by pilot testing. Data obtained from the rounds of the Delphi technique were analyzed with SPPS (24) in non-parametric variables using measures of central tendencies. A 75% consensus was reached in round 3 as predetermined as the acceptable score in all domains by the Delphi panelists. Hence the strategies are authentic, applicable and reliable for use as verified by the experts. Based on the rigour involved in the development of the strategies, the operational health workers (OHWs) who may have difficulties initiating and providing kangaroo mother care will benefit immensely. Furthermore, the strategies 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), maternity units and Primary Health Care centers (PHCs) thus helping in the reduction of neonatal mortality.

Keywords

Kangaroo Mother Care, Health Facilities, Edo State, Strategy, Total Quality Management

1. Introduction

Historically, most traditions practice thermal care for the newborn and regard it as essential for the survival of the neonate. This is provided at home by the mother and other women of the immediate and extended family [1, 2]. 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 nurses [2]. The major causes of neonatal mortality is prematurity which is further complicated by hypothermia due to lack of fat in the subcutaneous tissue. Hypothermia can be mediated by nursing the preterm in an incubator to provide the needed temperature for survival. Many infants have died because incubators were not readily available [3]. KMC is a cheap and scientifically proven method to provide heat for the neonate; it does 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 [4].Many countries have explored various methods to improve implementation of KMC through policy and protocol formulation following the World Health Organization KMC practice guidelines and training manuals of 2003. 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 [5]. 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 the 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 [6]. Findings indicated that the two tertiary hospitals fared better in the final assessment than the teaching (secondary) hospitals that has been practicing KMC. Conclusions were that, KMC requires long-term process and strengthening of institutions.

Despite these progress made in other climes, documented strategy to improve KMC implementation is unknown to have been developed in Nigeria. This is a country that has the highest absolute number of newborn deaths among countries in Sub-Sahara Africa with 28% premature births and neonatal mortality rate stagnated at 41 per 1000 live births between 1990 and 2013 [7]. It is worrisome particularly in Edo State, one of the 36 states in Nigeria where the adoption of KMC in healthcare facilities (except the tertiary facility) is almost non-existent. It is not known what issues abound in Edo State nor the strategies that will best fit to improve early implementation of KMC. The need to have a workable material for use in healthcare facilities in Edo State is apt. The study therefore aimed to develop strategies for the early implementation of KMC guidelines in healthcare facilities in Edo State, Nigeria. Strategies are an organizations' "game plan", which provides a framework for managerial decisions, and reflects the organizations' awareness of how, when and where it should compete; against whom and for what purposes [8]. The overall purpose of strategy, is to solve a problem or accomplish a goal through adding value for customers which links to the Total Quality Management (TQM) principle of customer focus. Having strategic formulation activities in place aids the organizations' ability to prevent problems as all stake holders are involved during the planning process. Group-based strategic decisions are likely to be drawn from best available alternatives. Furthermore, gaps and overlaps in activity amongst groups and individuals are reduced as participation helps to clarify differences in roles [9].

The TQM is based on three fundamental principles that encompass its overall concept which promotes continuous improvement. It focuses on the customers, internal and external (operational health workers, administrators and parents of preterm or low birth weight infants and other members of the health team and the public); process improvement and total involvement. Total quality improvement has six supporting elements of leadership, education and training, supportive structure, communications, and reward. The context in which the strategy was formulated relates to KMC implementation in all health facilities in Edo State, Nigeria, whether private or public, Tertiary/Secondary/Primary Health Care /units. Forty-three (43) conclusion statements formulated from the empirical study in phase I formed the evidence base for the development of the strategy in phase II [10].

Phase II: Strategy Formulation: The strategic process is a methodical, dynamic, entrepreneurial, structured process whereby an organization defines its identity and purpose over time, and develops a vision and mission. It is a process that enables the organization to prioritize long-and short-term objectives, decide on actions to achieve these objectives, assign accountability and allocate financial resources. The aforementioned are aligned to the environment to solve a problem or accomplish a goal [10]. This study applied the 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 TQM philosophy of Tenner and DeTorro (1992) [11, 12]. The strategy was influenced by the following assumptions:

a) The strategy is developed for use within the health services context of Edo State, Nigeria.
b) The strategy is 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 [12]. The three fundamental principles of TQM focuses on the customers, process improvement and total involvement. Furthermore, it has six components elements of leadership, team work, communication, support structure, employee involvement as well as education and training,
c) 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 need to continually assess the quality of nursing practice by using the Federal Ministry of Healths' criteria for harnessing all resources for health development towards the achievement of Universal Health Coverage.

Strategic Objectives: Long term objectives are the statements made to indicate the results that the programme seeks to achieve over a period of time [13]. They provide a general approach in guiding major actions designed to accomplish a programmes' major outcome and long-term objectives. 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. They were also based on the 43 problems identified from the empirical research in phase I and the Total Quality Management (TQM) philosophy with

the goal of continuous improvement of the quality of nursing practice. This is denoted in figure 1 as P1-43 and TQMe 1-6.

2. Method: Strategy Formulation

2.1. Population and Sampling for Phase II: The Delphi Process

Choosing experts in a Delphi process is the key to its success. The purposive sampling technique was therefore applied to achieve this aim because it helped the researchers to select participants that provided rich information. Eleven panelists which comprised 10 experts and 1 mother of a pre-term neonate were selected.

2.1.1. Inclusion Criteria

a. Management staff with work experience of more than 10 years.
b. Heads of unit or consultant in own area of expertise as determined by position held previously and at present; those in any managerial or decision-making position.
c. An operational health worker in the NICU with more than 5 years working experience.
d. A woman whose child had been admitted previously in the NICU and had participated in phase one interview data collection process.

2.1.2. Exclusion Criteria

a. Management staff with less than 10years work experience.
b. Operational health worker who have not spent up to 6months in the NICU.
c. Mothers of preterm infant who have not practiced KMC for three consecutive times.

2.2. Data Collection Tool

As with basic Delphi, a self-administered questionnaire was used for data collection. A summary of concluding statements from phase 1 lead to development of six objectives, functional plan and tactics through inductive and deductive logical reasoning, 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 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.

Table 1 highlights the strategic objectives, functional plans and tactics as formulated by the researchers from the problems identified and literature search which was sent to the Delphi panelist for verification, applicability and authentication.

KEY: PROBLEM IDENTIFIED (P1) P1-43	KEY: TOTAL QUALITY MANAGEMENT (TQMe) TQMe 1. Leadership TQMe 2. Communication TQMe 3. Teamwork TQMe 4. Support structure TQMe 5. Employee involvement TQMe 6. Education and training

Figure 1. *TQMe Elements and Functional Tactics.*

Table 1. *Functional Plans and Tactics.*

STRATEGIC OBJECTIVES	FUNCTIONAL PLAN	TACTICS
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	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). 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 maximize its full potentials (TQMe 1.2, 3, 4). 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).	Annual review of objectives in the form 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 freely available at no cost on first day at work. Quarterly seminar and study day for OHWs. Nurse facilitators should be encouraged to give presentations. Train the trainers' workshop to increase manpower and practice of KMC bi-annually. Encouragement and incentives in the form of special allowances and recognition for hard work to neonatal nurses annually by management.
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	2.1 Draw the government and the general public awareness to 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). 2.2 Develop position paper and statements that highlight the OHWs 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,	Encourage management to improve manpower supply by continued evidence based position paper and lobbying through the National Association of Nigeria Nurses & Midwives (NANNM) and facility pressure groups like staff associations and workers union to highlight the 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

STRATEGIC OBJECTIVES	FUNCTIONAL PLAN	TACTICS
	34; TQMe 1, 4, 5). 2.3. Advocate for the development and implementation of workforce planning for health workers (OHWs) 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). 2.3.1. Increase the pool of potential OHWs in all health facilities; private/public/tertiary/secondary/PHCs/units (PI 7, 27.29, 31, 33; TQMe1, 3, 4, 6). 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). 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). 2.3.4. Increase awareness and acceptance of KMC through multidisciplinary approach PI	care to increase interest. Encourage nurses in the nursing and midwifery schools to develop interest in neonatal nursing by sending OHWs on study leave with pay; organize seminars and talk shows at 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. OHWs to register with professional bodies and attend at least one sponsored workshop annually as a pre-requisite for promotion to the next level. Inter professional (e.g. doctors, nurses, community health workers) and multi sectoral collaboration (Health, Agriculture, Gender, and relevant developmental partners and community leaders.
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 in Edo State, Nigeria.	3.1 Create an administrative clinical nursing programmeme 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). 3.2 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 (PI 2, 3, 4, 7; TQMe 1, 2, 5). 3.2.1 Develop and implement health information /education programmemes in the ANC (PI 13, 32; TQMe, 2, 3). 3.2.2 Create administrative liaison clinical personnel to publish information about KMC in print and electronic media (PI 35; TQMe 1, 4). 3.2.3 Organize 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). 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)	Display the KMC policy guide documents on all notice boards in health facilities and units. Publish and disseminate the KMC guidelines to all staff in neonatal and midwifery units in the form of a handbook free of charge. 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 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. Inter-disciplinary 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.
4. To improve infrastructural development for both staff and parents of preterm infants in private/public, tertiary/secondary/PHC/units in Edo State, Nigeria.	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 organization and staff welfare association. P1, 3, 5; 6; 17; TQMe 1, 2, 4). Equipping a different room in the hospital to provide privacy for the mothers of preterm/LBW babies (P1, 18, 38, 40; TQMe 1, 3)	Develop position paper to highlight international standard and 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. 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 optimsation of the information dissemination system to all health facilities; private/public, tertiary/secondary/PHCs/units in Edo State, Nigeria	5.1 Reduce misconceptions and create awareness of KMC in the communities through gatekeepers (P23, 38, 40, 43; TQMe 2, 5). 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). 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).	Invite women leaders, chiefs and other community gatekeepers to seminars and workshops on KMC quarterly; and the annual KMC days annually. Use of radio, TV jingles and role 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 chats etc. as frequently as possible – weekly. Tertiary hospitals to serve as staff and information pull for KMC. Leadership and KMC training programmes to be

STRATEGIC OBJECTIVES	FUNCTIONAL PLAN	TACTICS
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	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 strategies for improved funding of neonatal care (PI 23, 30, 31, 33, 36, 37; TQMe 1, 3, 6). 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). 6.2 Create an administrative KMC coordinator to ensure that all administrative processes with regards to KMC facilitation (e.g. yearly neonatal births, neonatal mortality, yearly number of neonates who received KMC, other) are conducted and regular statistics are made available to end users e.g. to OHWs, CMD and policy makers (PI 11, 14, 15; TQMe 1, 4, 5). 6.3 Create positive work environments for OHW at health facilities/tertiary/secondary/PHCs/units (PI 4, 6, 7; TQMe 1, 4). 6.3.1 Evaluate job satisfaction of OHW and develop strategies to improve the work environment (PI 4, 6, 7: TQMe 1, 4). 6.3.2 Develop supervision and mentorship capacity among clinical personnel (PI 10, 11: TQMe; 1, 2, 4). 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). 6.4 Orientate and introduce newly admitted mothers of preterm babies to mothers who have successfully benefitted from KMC. 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 programmemes, (PI 1, 4, 6; TQMe 1, 4). 6.5 Provide a well-equipped and dedicated room for KMC facilitation (PI 21, 22, 29; TQMe 1, 4). 6.5.1 Provide well-furnished and equipped in-dwelling rooms for mothers of preterm babies (PI 21, 22, 29; TQMe 21, 22, 29).	organized and taken to the doorsteps of the secondary and PHCs facilities bi-annually. Local community chiefs and women leaders to be invited to workshops and seminars on KMC bi-annually and use such fora to correct misconceptions. 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). 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 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 provide on-the-spot assistance to nurses and mothers of preterm babies at the secondary, PHCs/units 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 familiarisation tour of facilities and orientation of mothers during ANC *at least once* before 28 weeks gestation; newly admitted mothers of preterm babies to be introduced mother 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.

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; section "B" asked panelists' input to the developed strategy in a Likert scale in terms of the strategy applicability, feasibility, acceptability and measurability. The questionnaire concluded in an open-ended question format where panelists were to make contributions to any areas or state reasons for their ratings. A 75% agreement by panelists on all domains in the questionnaire was accepted as authentic.

2.2.1. Instrument Reliability and Validity

Extensive literature search on the study objectives, problems identified in phase one and a statistician validated the instrument. Furthermore, a pilot test among three independent health workers was analyzed with the Cronbach Alpha which yielded more than 0.667 on all domains. Their input was utilized in the final draft to refine and revise the questionnaire.

2.2.2. Data Collection Process

Data collection process was determined by the feasibility of the study and the best way previously agreed on by the panelists. In a quantitative Delphi technique, this process is called rounds [10]. The addresses and contact details of the panelists were obtained and an information sheet and consent form were administered prior to the commencement of the study. Three rounds beginning from round one which was a quantitative and an open-ended questionnaire to obtain panelists' suggestions on the draft strategies was involved. This served as the cornerstone of soliciting for specific information from the experts/panelists. The other 2 rounds contained panelists' position and that of other panelists. They were requested to adjust their positions or give reasons why they want to maintain their previous positions.

2.2.3. 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, thus giving a response rate of 91%.

2.3. Statistical Analysis

Data from the first round were analyzed 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. None-parametric statistics was used to describe and synthesize data and reported in measures of central tendencies e.g. mean (f), median and mode [15].

3. Result and Interpretation

The affiliation of the panelists is depicted in table 2. Their designation, discipline and work experience shows that 8 (80%) have more than 10years working experience. Among the panelists are a nurse faculty and the mother of a preterm infant who was previously in phase I of the study

Table 2. *Demography of Delphi Panelists.*

Number	Discipline	Skill	Organization	Work Experience
2	Medical practitioner.	Neonatology/Child Health.	Tertiary health institution.	12years
1	Medical practitioner.	Obstetrics and Gynaecology.	Tertiary health institution.	10years
1	Nursing: Assistant Director of Nursing Services (ADNS).	Nursing Administration.	Tertiary health institution.	25years
1	State Director of Nursing Services	Administration	Public servant	34years
1	ADNS Neonatal Intensive Care Unit (NICU).	Neonatal Nursing /Management.	Tertiary health institution.	23years
1	ADNS: Public Health unit.	Public Health Management.	Tertiary health institution.	25years
1	Operational health worker in the NICU.	Facilitation of KMC.	Tertiary health institution.	15years
1	Nurse faculty (Senior Lecturer).	Curriculum and training.	Tertiary health institution.	9years
1	Mother of a preterm infant.	Experiences in KMC.	Tertiary health institution: Mother of preterm infant admitted in the facility following parturition. Educated 2nd school teacher.	2years
TOTAL=10				

Table 3 shows the results of the first round (*Round 1*). The ratings of panelists on the vision, mission, values and principles, as well as the objectives and tactical plans of the strategy are displayed on the table. Three panelists scored all the items above 75% (P_3, 4 and 8), as highlighted.

Table 3. *Ratings and Scores in Round 1.*

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

*P: Panelist

Round 2: In this round, participants whose responses did not meet the predetermined acceptance criteria of 75% received a second questionnaire for review where the list for the items, their ratings, minority opinions, and items which achieved consensus were distributed to the panelists. They were asked to review the items summarized by the researchers 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 analyzed 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.

Table 4 shows the result of Round 3. It explains the strategic objectives and its functional plans and tactics as authenticated and recommended by the Delphi panelists. A consensus was determined by 75% agreement of the responses after data analysis. The six principles of TQM were labeled TQMe1-6 while the problem identified is depicted with the letter P.

Table 4. *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
Objective 6	85	96	95	98	100	85	95	95	80	90

* P_1 to P_10 Delphi Panelists

Table 5 highlights the approved strategies and functional tactics by the panelists based on consensus of 75% on all domains.

Table 5. *Strategies and Functional Tactics.*

STRATEGIC OBJECTIVES	FUNCTIONAL PLAN	TACTICS
1. To improve the knowledge, attitude and practice (KAP) of OHW	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) 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) 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)	Annual review of objectives in the form 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 OHW and nurse facilitators encouraged to give presentation.
2. To negotiate improvement in the human resources base for nursing practice, especially neonatal trained nurses	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) 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) 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) 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) 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) 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)	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. 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 neonatal unit to develop an interest in neonatal nursing by sending OHW on study leave with pay. Nurses trained in neonatology should remain in dedicated units and not be 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.

STRATEGIC OBJECTIVES	FUNCTIONAL PLAN	TACTICS
3. To optimize the dissemination of the information system in coordination and awareness creation of KMC in all health facilities. tertiary/secondary/PHCs/units	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) 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) 3.2 Develop and implement health information /education programs in the ANC (P13, 32: TQM, 2, 3) 3.2.1 Create administrative liaison clinical personnel to publish information about KMC in print and electronic media. (P35) TQM 1, 4) 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)	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 Display the KMC policy guide on all notice boards in health facilities and units. Publish and disseminate KMC guidelines to all staff in neonatal and midwifery units in the form of handbook free of charge 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. 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.
4. To expand nursing services, development and innovation in nursing practice	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) 4.1.2 Market KMC as a preferred mother to 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) 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) 4.4 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 communication is provided to CMDs and all OHWs. (P; 11, 14, 15; TQM; 1, 4, 5) 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)	Tertiary hospitals to serve as staff and information pull for KMC Leadership and KMC training programmemes to be organised and taken to the doorstep of secondary and PHCs facilities bi-annually Local community chiefs and women leaders to be invited to workshops and seminars on KMC and use such fora to correct misconceptions bi-annually. 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) 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.
5. To establish an enabling working environment that focuses on the needs of OHW and parents of preterm babies.	5.1 Create positive work environments for OHW at health facilities, tertiary/secondary/PHCs/units. (P 4, 6, 7: TQM1, 4) 5.1.1 Evaluate the job satisfaction of OHW and develop strategies to improve the work environment (P 4, 6, 7: TQM1, 4) 5.1.2 Develop supervision and mentorship capacity among clinical personnel. (P10, 11: TQM1, 2, 4) 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) 5.1.4 Orientate newly admitted mothers of preterm babies to mothers who have successfully benefited from KMC. 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 programmemes. (1, 4, 6: TQM; 1, 4) 5.3 Provide a well-equipped and dedicated room for KMC facilitation. (P21, 22, 29: TQM1, 4.5) 5.3.1 Provide well-furnished and equipped in-dwelling rooms for mothers of preterm babies. (P 21, 22, 29: TQM 1, 4)	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 /units 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 complain and report improper treatment and uncooperative stance by managers too. Do a guided and familiarization tour of facilities and orientation of mothers of newly admitted babies; introduce mother to other mothers within six hours of admission Leadership training and delegation of duties with corresponding authority to enable skill development within 12 months of working in the NICU

4. Discussion

In this strategy, the customer focus was 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. 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/2nd /PHCs/units should 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. This is 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) [17]. 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. 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 which are based on the philosophy of TQM. Therefore, to change, revise or renew the strategy objectives and functional tactics all these fundamentals must be considered and subscribed to.

The researchers assumed the stance of the pragmatists because they believe that the object of investigation though different in social reality can be investigated by applying different methods working in conjunction with each other. They see 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 strategy whose development they were involved in [10]. This was achieved by exploring their knowledge, attitudes, practices, challenges and possible solutions through a quantitative approach by the application of the health policy analysis model. This led to the understanding of policy implementation in the healthcare delivery system. The model was used to highlight actor‘s involvement in policy making, implementation and evaluation with all the key factors (context, process and content) deserving equal attention.

Due to the rigour involved in developing these strategies, its successful implementation has the potential to contribute to the knowledge base of nursing practice, because it was created by the users of the document. It will serve as a reference point for nurses in the neonatal intensive care and maternity units. An institution‘s policy adoption and implementation of the study‘s recommendations will lead to a reduction in the neonatal mortality of such an institution.

5. Conclusion

This paper has successfully x-rayed the processes that culminated in the development of strategies to enhance KMC implementation. Awareness and utilization of KMC guidelines among health workers was found to be poor. Just like previous ones developed and explored in South Africa and Indonesia, this study is novel as the end result was by the end users and experts in the field [16, 17]. If these strategies are put into practice as outlined, the researchers are of the opinion that neonatal mortality rate will decline.

6. Recommendations

KMC guidelines and utilization should be extended to health workers in the PHCs and workers in the private health sectors. These group of health workers should not be discriminated against in terms of workshops and seminars because a handful of preterm deliveries take place at the PHCs and private clinics

Limitations

Health workers at the PHCs and secondary levels were not investigated on their knowledge of KMC. A focus group discussion or in-depth interview with participants was not possible because of the neonatal environment and busy schedule. Further studies may explore these areas and methodology suggested.

References

[1] Esienumoh EE, Akpabio II, Etowa JB. Cultural Diversity in Childbirth Practices of a Rural Community in Southern Nigeria. J Pregnancy Child Heal. 2016; 3 (5): 2–8.

[2] Dalal A, Bala D, Chauhan S. A cross - sectional study on knowledge and attitude regarding kangaroo mother care practice among health care providers in Ahmedabad District. Int J Med Sci Public Heal. 2014; 3 (3): 240–3.

[3] Liu L, Oza S, Hogan D, Perin J, Rudan I, Lawn JE, et al. Global, regional, and national causes of child mortality in 2000-13, with projections to inform post-2015 priorities: An updated systematic analysis. Lancet. 2015; 385 (9966): 430–40.

[4] Bergh A-M, Charpak N, Ezeonodo A, Udani RH, van Rooyen E. Education and training in the implementation of kangaroo mother care. South African J Child Heal. 2011; 6 (2): 38–45.

[5] Conde-Agudelo A D. & Díaz-Rossello, J. L Kangaroo mother care to reduce morbidity and mortality in low birth eight infants (Review) Cochrane: Database of Systematic Reviews. Cochrane Library. 2016.

[6] Bergh AM, Rogers-bloch Q, Pratomo H, Uhudiyah U, Sidi IPS, Rustina Y, et al. Progress in the implementation of kangaroo mother care in 10 hospitals in Indonesia. J Trop Pediatr. 2012; 58 (5): 402–5.

[7] Akinyemi JO, Bamgboye EA, Ayeni O. Trends in neonatal mortality in Nigeria and effects of bio-demographic and maternal characteristics. BMC Pediatr. 2015; 15 (1): 1–12.

[8] Teece DJ. Business models, business strategy and innovation. Long Range Plann. 2010; 43 (2–3): 172–94.

[9] Engert S, Baumgartner RJ. Corporate sustainability strategy - Bridging the gap between formulation and implementation. J Clean Prod. 2016; 113: 822–34.

[10] Walt G, Gilson L. Reforming the health sector in developing countries: the central role of policy analysis. Health Policy Plan. 1994; 9 (4): 353–370.

[11] Adler TR, Pittz TG. The Importance of Managing Strategic IT Project Contracts Using a Business Process Approach. Int J Inf Technol Proj Manag. 2016; 7 (4): 1–12.

[12] Bryson JM. A Strategic Planning Process for Public and Non-profit Organizations. Lang Range Plan. 1988; 21 (1): 73–81.

[13] Tenner AR, DeTorro IJ. Total quality management: Three steps to continuous improvement. Massachusetts: Addison-Wesley; 1992. 226 p.

[14] Peace J, Robinson R. Strategic Management: Formulation, implementation and control. 7th ed. Irwiin, Boston:: McGraw Hill.; 2000.

[15] Hasson F, Keeney S. Enhancing rigour in the Delphi technique research. Technol Forecast Soc Change. 2011; 78 (9): 1695–704.

[16] Brink H, Van-Der Walt C, Van-Rensburg C. Fundamentals of research methodology for health care professionals. 2nd ed. South Africa: Juta Academic; 2010.

[17] UNDP. Sistainable Development Goals. Genva; 2015.

[18] Pattinson R, Arsalo I, Bergh A-M, Malan A, Patrick M, Phillips N. Implementation of kangaroo mother care: A randomized trial of two outreach strategies. Acta Paediatr. 2005; 94 (7): 924–7.

[19] Bergh A-M, Manu R, Davy K, van Rooyen E, Asare GQ, Williams JKA, et al. Translating research findings into practice – the implementation of kangaroo mother care in Ghana. Implement Sci. 2012; 7 (1): 75-84.