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Barriers to the Implementation of Essential Intrapartum and Newborn Care Protocol (EINC) in Public and Private Hospitals in Iligan City

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Keywords: *essential intrapartum, newborn care, EINC barriers, quantitative research, Philippines.*

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Barriers to the Implementation of Essential Intrapartum and Newborn Care Protocol (EINC) in Public and Private Hospitals in Iligan City

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Abstract- Childbirth is a central event to human nature and one that has a great impact on the life of women and their families. Over the years, remarkable progresses were made in the safety and comfort of human labor and birth but there is also an increase in maternal as well as neonatal mortality. The DOH embarked on Essential Intrapartum and Newborn Care (EINC) to address neonatal deaths in the country. This descriptive correlation study was conducted to determine the extent of implementation of the EINC protocol in the three areas: labor room (LR), delivery room (DR), and Neonatal Intensive Care Unit (NICU) of the selected private and public hospitals in Iligan City, and the perceived barriers to its implementation. A sample of 62 staff nurses (86.5%) and midwives (14.5%) were purposively selected from two private hospitals and three public hospitals in Iligan City. A three-part structured questionnaire was utilized to carry out the rationale of the study. The results revealed that the staffs were generally applying the steps/procedures in the EINC protocol in their respective units. Data analysis revealed the following significant relationships between the extent of EINC implementation and the perceived barriers to its implementation: the respondents' perceived barriers in terms of (1) physical set-up, financial constraints and cultural barriers had significant relationship with the extent of EINC implementation in LR; (2) physical set-up and cultural barriers had significant relationship with the extent of EINC implementation in DR; and (3) lack of key skills and expertise and cultural barriers had significant relationship with the extent of EINC implementation in NICU. Moreover, it was further concluded that there was a significant difference in the implementation of EINC protocol between public and private hospitals in Iligan City. The findings underscore the need for healthcare institutions to strengthen their information drive on EINC which can result to its increased implementation which can in turn lead to improved quality of care delivered by health workers attending to institutional deliveries. This may involve engaging and empowering the staff; providing education on best practices and existing deficiencies; discussing potential barriers and introducing the EINC protocol through focused training; and establishing a mechanism for ongoing monitoring and evaluation.

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I. INTRODUCTION

Childbirth is central event to human nature and one that has a great impact on the life of women and their families and over the years, remarkable progresses were made in the safety and comfort of human labor and birth but there is also an increase in maternal as well as neonatal mortality despite these progresses. Annually, there are approximately 3.7 million neonatal deaths and 3.3 million stillbirths worldwide (Wardlaw et.al, 2012). The Philippines is one of the 42 countries that account for 90% of under-five mortality worldwide. Thirty seven percent (37%) or 40,000 of them are newborn (United Nations Development Groups, 2012). The high mortality and morbidity rates in newborn are directly related to inappropriate hospital and community practices currently employed throughout the Philippines. Additionally, the current practices in hospitals fell below the recommended World Health Organization (WHO) standards and robbed the newborns of the natural protection offered by the basic recommended interventions (DOH, 2009).

In an attempt to provide quality maternal and newborn care, and to address neonatal deaths in the country, the Department of Health (DOH) embarked on Essential Intrapartum and Newborn Care (EINC). Under the umbrella of Unang Yakap Campaign, the essential newborn care is an evidenced-based strategic interventions aimed at improving newborn care and helping neonatal mortality (Katharina, 2010). With this campaign, the DOH aims to cut down infant mortality in the Philippines by at least half. The campaign employs Essential Newborn Care (ENC) Protocol as a strategy to improve the health of the newborn through interventions before conception, during pregnancy, and soon after birth, and in the postnatal period. The ENC Protocol provides an evidence-based, low cost, low technology package of interventions that will save thousands of lives (Katharina, 2010). In this paper, the terms "EINC" and "Unang Yakap" will be used interchangeably.

The essential newborn care package is a four-step newborn time-bounded intervention undertaken to lessen newborn deaths. Four core steps were recommended in a time bound sequence which includes immediate and thorough drying of the baby,

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early skin-to-skin contact, properly timed cord clamping and non-separation of the newborn and mother for early initiation of breast feeding (DOH, 2009). According to Banzon (2013), Unang Yakap calls for the end of old, routine health-care practices that have been previously deemed "infallible" despite the absence of evidence. For the mother, routine enemas, restriction of food and drinks during labor, routine intravenous fluid insertion, perineal shaving and pudal pressure should be abandoned. For the newborn, routine suctioning upon birth, routine separation of mother and early bathing (less than six hours after birth) must be discontinued. Application of various substances to the umbilical cord and the practice of foot printing should be discouraged, which has no value for the baby.

The recommended EINC practices during the Intrapartum period include continuous maternal support by having a companion of choice during labor and delivery, freedom of movement during labor, monitoring progress of labor, position of choice during labor and delivery, spontaneous pushing in a semi-upright position, non-routine episiotomy and Active Management of the Third Stage of Labor (AMSTL) (Consolidated Annual Report on Activities, 2012).

In the early stages, EINC protocol was adopted initially by 11 pilot hospitals in Central Luzon, Visayas and 2 hospitals in Mindanao (Chattoe-Brown et.al, 2012). Adventist Medical Center-Iligan, Dr. Uy Hospital Inc., Mercy Community Hospital and Gregorio T. Lluch Memorial Hospital were among the hospitals in Iligan City, which adopted the guidelines of EINC protocol subsequently. Accordingly, these hospitals have provided trainings and seminars on EINC to their staff to ensure that the EINC protocol is implemented correctly in their institutions.

II. FRAMEWORK

The Hierarchy of Needs theory (Maslow, 1943), the Birth Territory Theory (Fahy et.al, 2008), and the Attachment theory Bowlby and Ainsworth have greatly influenced this study.

The Hierarchy of Needs theory by Maslow (1943) served as the primary theory from which this study was anchored. Maslow attempted to explain what human beings need, which includes five motivational needs; often depicted as hierarchical levels within a pyramid. This five-stage model can be divided into basic or deficiency needs e.g. physiological, safety, love, and esteem and growth needs self-actualization (McLeod, 2007). The deficiency or basic needs are said to motivate people when they are unmet. Also, the need to fulfill such needs will become stronger the longer the duration they are denied. In this study, meeting the needs on Maslow's hierarchy is essential to a woman's emotional wellbeing, and hence important to both the physical progress and the woman's experience of birth.

The Birth Territory Theory (Fahy, et.al. 2008) refers to the features of the birth room, called the 'terrain', and the use of power within the room, called 'jurisdiction'. Terrain' is a major sub-concept of Birth Territory. It denotes the physical features and geographical area of the individual birth space, including the furniture and accessories that the woman and her support people use for labor and birth. The central proposition of Birth Territory theory is that when midwives and healthcare professionals create and maintain ideal environmental conditions, maximum support is provided to the woman and fetus in labor and birth which results in an increased likelihood that the woman will give birth under her own power, be more satisfied with the experience and adapt with ease in the post birth period which is exactly what the Essential Intrapartum and Newborn Care (EINC) protocol intends to accomplish.

The basic tenets of the Attachment theory by Bowlby and Ainsworth is about a child's tie to the mother and its disruption through separation, deprivation, and bereavement (McLeod, 2008). One of the components of EINC is 'early attachment' and non-separation between mother and newborn. Bowlby proposed that infant's unmistakable attachment behavior is made up of a number of component instinctual responses that have the function of binding the infant to the mother and the mother to the infant. These component responses (among them sucking, clinging, and following, as well as the signaling behaviors of smiling and crying) mature relatively independently during the first year of life and become increasingly integrated and focused on the mother. In addition to this, Bowlby believed that attachment had an evolutionary component; it aids in survival. He stated that "the propensity to make strong emotional bonds to particular individuals is a basic component of human nature".

III. OBJECTIVES OF THE STUDY

Giving birth in developing countries like the Philippines has been seen as more fatal and dangerous for mothers and infants alike. Thus, the need for a paradigm shift from the prevailing standard procedures into the new EINC protocol cannot be over emphasized. According to Banzon (2013) EINC is easily implementable, be it the rural health unit, to lying-in clinic and even the hospital setting. Moreover, EINC is about health systems. It is a choreographed set of actions requiring team effort from health professionals—obstetricians, anesthesiologists and pediatricians alike, administrative/support staff of the birthing facility and the mother's family. Thus, failure to implement does not mean failure of one, but failure of the system (Banzon, 2013). The primary goal of this research was to determine the extent of implementation of the EINC

protocol in public and private hospitals in Iligan City. The following objectives add towards the main aim of the investigation:

1. To find out the staff's perceived barriers to the implementation of Essential Intrapartum and Newborn Care (EINC) protocol in their respective units.
2. To find out the relationship between EINC implementation and the perceived barriers to its implementation in the staff's respective units.

a) *Statement of the Problem*

This study was conducted to determine the extent of implementation of the Essential Intrapartum and Newborn Care (EINC) protocol in public and private hospitals in Iligan City. More specifically, the study aims to answer the following questions:

1. What are the staffs' perceived barriers in the implementation of EINC protocol in the hospitals in Iligan City?
2. What is the extent of implementation of EINC protocol in the private and public hospitals in Iligan City?
3. Is there a significant relationship between the extent of EINC implementation and the perceived barriers in its implementation.

b) *Significance of the Problem*

This study aimed to determine the extent of implementation of the EINC protocol in order to convey a better understanding of its application in the hospitals in Iligan City. Additionally, the results of this study may serve as basis for assessment, performance or feedback/evaluation tool of the extent of implementation of the EINC. It will also be a means to monitor staff in the delivery of quality care services in the delivery room and neonatal care units. Furthermore, the results of this study can be used for training, retraining and continuing education for hospital staff members as this may improve overall organizational performance. Lastly, the results of this study may result in less maternal and neonatal deaths and complications.

IV. METHODOLOGY

a) *Research Design*

This investigation employs a quantitative descriptive correlational design to answer the research questions. The descriptive design was used to describe the extent of EINC implementation and the perceived barriers to its implementation among staff nurses and midwives in the hospitals of Iligan City. The correlation method of research was used to investigate the relationship between the extent of EINC implementation and the perceived barriers to EINC implementation.

b) *Research Participants and Research Locale*

For the purpose of selecting the setting of the study, five hospitals in Iligan City (2 private hospitals and

three public hospital) were selected as the locale and the delivery room (DR), labor room (LR), and neonatal intensive care unit (NICU) were the focus areas of the study. These hospitals were purposefully selected since they were among the first implementers of EINC protocol in Iligan City. The respondents were staff nurses and midwives who were purposively chosen based on the following criteria: (1) He or she must be currently assigned in one of the areas of OB-ER, DR, or NICU; and (2) He or she must have been working in one of the aforementioned areas for at least six months after the implementation of the EINC protocol in their respective areas. The subsequent sample consisted of 53 nurses and 9 midwives who were working for not less than six months in one or more of the three areas of LR, DR, and NICU. The respondents were mostly female with a significant number of the respondents who were single, with ages ranging from 21 to 51 years old, earning a monthly income of less than PhP 10,000.00 with 1 to 5 year length of service.

c) *Sampling Procedure*

A purposive sampling method without replacement was used in selecting the hospital staff to be the respondents in this study from all the members of the entire target population. Additionally all registered nurses and registered midwives assigned in the special areas under study (OB, LR, DR) of the selected private and public hospitals in Iligan City and Lanao del Norte as of the time of data gathering have met the inclusion criteria required by the study.

d) *Research Instrument*

To determine the extent of implementation of Essential Intrapartum and Newborn Care (EINC) in the selected hospitals in Iligan City and Lanao del Norte, the researcher utilized a self-made structured four-part questionnaire.

Part I of the research instrument covered the personal profile of the respondents and includes measures of demographic characteristics such as age, gender, marital status, religion, professional degree, highest educational attainment, type of hospital employed, status of employment, monthly income, work setting, and length of service in the aforementioned special areas of the hospital where currently working. Part II of the research instrument consisted of the possible barriers to the implementation of evidence-based practice e.g. EINC/Unang Yakap protocol. The possible barriers that have been pre-identified by the researcher fall into eight categories, namely; physical set up, institutional support, financial constraints, time constraints, lack of resources, lack key skills and expertise, lack of proper monitoring and evaluation, and cultural barriers. Under each of these categories, the respondents indicated their answers as to the perceived barrier to the implementation of the said protocol and answered the choices that apply. Part III of the research

instrument was adopted from the EINC step-by-step procedures as recommended by the DOH and was revised and summarized by the researcher to fit the objective of the present study. Part III of the research instrument was further subdivided into three parts: A.) Intrapartum care composed of seven statements answered by labor room midwives and nurses who were currently assigned in the said area; B.) Intrapartum care comprised of eighteen statements answered by staff nurses and midwives assigned in the delivery room and C.) The newborn care- sixteen- step protocol answered by respondents assigned in the NICU. In this part of the

questionnaire, the respondents were asked to indicate the frequency of their implementation of each of the step in the DOH recommended EINC protocol using the following scale: namely: 5 - *Always*; 4 - *Often*; 3 - *Sometimes*; 2 - *Seldom*; and 1 - *Never*.

A pilot study was carried out to revise the questionnaire and for item analysis. The validity and reliability of the questionnaire was measured through computing Cronbach's alpha, which shows high reliability values indicating that all of the items used for each component in the questionnaire have a high and consistent reliability values.

Reliability Coefficients	N of Items	Chronbach's Alpha	Reliability Interpretation
Extent of Implementation of the EINC Protocol in Labor Room	7	0.849	High
Extent of Implementation of the EINC Protocol in Delivery Room	18	0.747	High
Extent of Implementation of the EINC Protocol in Nursery Room	16	0.874	High

e) Collection of Data

Prior to the actual conduct of the study, the researcher visited the different hospitals in Iligan City. A preliminary talk was conducted with the chief nurse of each hospital to explain the purpose as well as the possible benefits of the research to the hospitals under study. During this time, the researcher also requested for a list of the registered nurses and registered midwives assigned in the labor room, delivery room and neonatal intensive care unit with the corresponding length of service in their respective areas. The purpose of which was to determine the actual number of respondents. All registered nurses and registered midwives who had served for less than six months in the three areas of OB-ER, DR, and NICU were eliminated as potential respondents. Another visit was made again to formally deliver the permission letter to seek approval of

the respondents' participation in the study. It was also an opportunity to get the respective schedules of the respondents to facilitate the easy gathering of data. The final and subsequent visits were made to invite the respondents to participate in the study. Among the 62 staff nurses and midwives who agreed to participate, all of them completed all the questionnaires (100% response rate). The data gathered were tallied, tabulated, and then subjected to statistical treatment.

f) Treatment of Data

The data was analyzed through the statistical package for the social sciences. A series of Cramer's V correlation was used to examine the association between the extent of EINC implementation and the sources of EINC knowledge. The alpha level was set at .05 for statistical significance.

V. FINDINGS

Table 1 : Frequency and Percentage Distribution, Respondents' Perceived Barriers in the Implementation of EINC Protocol in terms of Physical Set-up, Institutional Support and Financial Constraints

Perceived Barriers in the Implementation of EINC Protocol	F	%
Physical Set-Up		
The space of the unit/area is limited and congested	29	46.8
Lack of facilities e.g. as beds, delivery tables	25	40.3
Lack of privacy	15	24.2
Hand washing area is not near the unit	14	22.6
Institutional Support		
Lack of support from the hospital administration	23	37.1
Lack of support from the head of the department	4	6.5
Lack of support from the nursing service unit	4	6.5

Lack of support from medical staff (OB-Gyne)	4	6.5
Financial Constraints		
No funding available to procure needed materials, supplies and equipment	24	38.7
No funding available to renovate the unit to cater needs of client	20	32.3
No funding to undergo formal training and seminar on EINC by the hospital management	20	32.3
No funds available for reproduction of guideline materials	10	16.1

Table 1 shows the respondents' perceived barriers to the implementation of EINC/Unang Yakap Protocol in their respective departments (DR, LR & NICU) in terms of physical set up of the unit/area, institutional support from the administration for the proper implementation of the said protocol, and financial constraints in the effective implementation of the protocol in the unit/area.

Based on respondents' perceived barriers to the implementation of the EINC Protocol/Unang Yakap Protocol vis a vis Physical Set-up, almost half of the respondents (46.8%) believed that the space of the unit/area is limited and congested for the proper implementation of the EINC/Unang Yakap Protocol while nearly half of the respondents (40.3%) believed that lack of facilities e.g. as beds, delivery tables is a barrier in the proper implementation of the protocol. Thus, a majority or 87% of the respondents believe that lack of adequate space and necessary facilities are the main hindrance in

the proper implementation of the said protocol in their respective area/s of assignment. For public hospitals, this can largely be attributed to budgetary constraints.

As for Institutional support, 37.1% of the respondents believe that lack of support from the hospital administration is a barrier in the implementation of the protocol and only a few believe that support from the heads of the department, nursing service unit, or from the medical staff is lacking. As for financial constraints, the lack of funds affects most aspects of EINC Protocol implementation as shown in the almost even distribution of barriers based on financial constraints. The results show that the respondents believe that the proper implementation of EINC depends on the availability of funds to procure needed materials, supplies, and equipment. Additionally, they also feel that even if the unit/area is congested, no funds are available to renovate the unit thereby limiting the full implementation of EINC.

Table 2 : Frequency and Percentage Distribution, Respondents' Perceived Barriers in the Implementation of EINC Protocol in terms of Time Constraints, Lack of Resources & Lack of Key Skills & Expertise

Perceived Barriers in the Implementation of EINC Protocol	<i>F</i>	<i>%</i>
Time Constraints		
Staff to patient ratio is not proportional	41	66.1
Too many things to accomplish e.g. documentation	23	37.1
Surge of patient admission is unpredictable	18	29.0
Waiting time for medical personnel to give order for appropriate interventions is delayed	8	12.9
No patience to wait in patients with delayed progress of labor	1	1.6
Lack of Resources		
The unit is under staff	35	56.5
Inadequate supply and equipment	24	38.7
Manual not available for immediate reference	5	8.1
Medication e.g. Oxytocin is not readily available	4	6.5
Lack of Key Skills & Expertise		
Lack of training/ seminar	25	40.3
Unfamiliar with the new protocol	9	14.5
No opportunity to learn the EINC protocol	5	8.1
Protocol/ EINC guideline is not clearly understood	0	0

Table 2 shows the respondents' perceived barriers to the implementation of EINC/Unang Yakap

Protocol in their respective departments (Delivery Room, Labor Room, Neonatal Intensive Care Unit) in the

selected hospitals in Iligan City and Lanao del Norte in terms of time constraints in executing all the necessary steps required for EINC, lack of resources, and lack of key skills and expertise of personnel in EINC.

In terms of time constraints, 66.1% of respondents believe that proper implementation of the EINC Protocol is hindered mainly by disproportional staff to patient ratio, meaning that a nurse or midwife has to attend to an inordinately high number of patients. Add to this the documentary functions of the staff and you have staff that have to attend to so many patients at the same time that they have to prepare reports.

A study (Gale, 2001) was conducted to examine the amount of support being provided by nurses during the childbirth and factors that influence provision of support. It was found out in that study that nurses spent only 12.4% of their total time providing supportive care to laboring women. Barriers to providing support to patient identified by nurses include lack of time and insufficient staff.

Lack of resources as a barrier pertains to inadequate number of staff in the unit to cater to the needs of all patients which relates to time constraint as a barrier such as disproportional staff to patient ratio and of course, inadequate supply and equipment. Again, this is due to the lack of funds in the hospitals surveyed as validated by the results obtained in Table 16 showing that financial constraint as a barrier affects most aspects of EINC Protocol implementation.

As for lack of key skills and expertise as a barrier to the proper implementation of EINC Protocol, 40% of the respondents feel this is due to lack of training and unfamiliarity with new protocol which can be corrected with additional training. Provided, of course, that the hospitals have the funds.

According to a study (Waldemar, 2010) funded by the National Institutes of Health and the Bill and Melinda Gates Foundation, the rate of stillbirths in rural areas of six developing countries fell more than 30 percent following a basic training program in newborn care for birth attendants,. The study tracked more than 120,000 births. The study tested the efficacy of a three-day Essential Newborn Care training regimen that

covers basic newborn care techniques, the importance of early breastfeeding, how to keep infants warm and dry, and signs of serious health problems. The findings in that study suggest that a low-cost instructional regimen for birth attendants can be effective in reducing stillbirths in parts of the world where most births are not attended by a physician. The study authors found that the overall rate of infant death during the first 7 days of life did not change among infants who had been administered the essential newborn care regimen. However, the rate of stillbirths dropped sharply -- from 23 per 1,000 deliveries to 15.9 per 1,000. The researchers believe these improvements were seen in infants who had not drawn a breath on their own and would have been considered to have been born dead by birth attendants who had not received the early newborn care training. The researchers explained that many infants do not take a breath when they are first born. In the majority of these cases, some kind of stimulation -- rubbing the back or tapping the soles of the feet -- will start the baby breathing on its own. Other infants need air pushed into their lungs. Birth attendants without training in recognizing and resuscitating newborns who do not breathe at birth may consider the babies to be stillborn and not attempt to revive them. The study authors concluded that the essential newborn care training was most effective in providing attendants needed skills and expertise in newborn resuscitation. The greatest decrease in stillbirth rates was among deliveries attended by nurses, midwives, and traditional attendants, all of whom, the researchers believe, would likely not have received such training.

The findings in the present study that lack of key skills and expertise is a barrier to the proper implementation of EINC Protocol is further supported by a study conducted in India to evaluate the effectiveness of the Essential Newborn Care Package in reducing neonatal sepsis. The study identified the key themes as barriers for the uptake of interventions included in the Essential Newborn Care Package were - skills of care provider, increased, risk factors and health seeking behavior (Masters, 2008).

Table 3 : Frequency and Percentage Distribution, Respondents' Perceived Barriers in the Implementation of EINC Protocol in terms of Lack of Proper Monitoring and Evaluation and Cultural Barriers

Perceived Barriers in the Implementation of EINC Protocol	F	%
Lack of Proper Monitoring and Evaluation		
1. No evaluation carried out to assess implementation of EINC protocol	24	38.7
2. No monitoring conducted by heads/supervisor	12	19.4
3. Lack of clear guidelines (sanctions) if protocol is not observed	9	14.5
4. No assessment initiated by the nursing service department	3	4.8
Cultural Barriers		
1. Others staff are doing the old already established practices	15	24.2
2. Peer pressure	12	19.4

3. Feeling of not having the energy or desire to change the old way	3	4.8
4. Perceived self-inefficacy to change	2	3.2

Table 3 shows the respondents' perceived barriers to the implementation of EINC/Unang Yakap Protocol in their respective departments (Delivery Room, Labor Room, Neonatal Intensive Care Unit) in the selected hospitals in Iligan City and Lanao del Norte in terms of lack of proper monitoring and evaluation and cultural barriers in the implementation of EINC Protocol.

As for Lack of Proper Monitoring and Evaluation as a barrier, the respondents feel that lack of evaluation, monitoring, and clear guidelines are the main barriers in the implementation of EINC Protocol in their respective units/area. 38.7% of the respondents believe that their respective hospitals do not evaluate whether or not the EINC Protocol is being carried out properly while 19.4% of the respondents believe that their heads/supervisors do not monitor the staff and personnel if they are implementing the said protocol or not. To correct the situation, the hospital administration should have clear guidelines, which should require supervisors to regularly monitor the EINC Protocol and submit their evaluation and recommendations to their superiors.

Cultural barriers are related to the social patterns in the area/unit that discourage the adoption of EINC protocol, for instance, older colleagues still have considerable say over decisions concerning pregnancy, birth and child care. As for cultural constraints, the main culprit is the tendency of the staff to do what they are used to doing or doing the already established practices. 24.2% of the respondents feel that the effective implementation of the EINC Protocol in their respective units/areas is hindered by the staff resistance to change while 19.4% of the respondents feel that peer pressure impacts on the full implementation of the said protocol.

Based on these findings, it can be inferred that the respondents' tendency of doing the established practices in their respective area/s and their resistance

to change is greatly influenced by their peers. This can of course, be addressed by the hospital administration through meetings and discussions, as well as policy guidelines. According to Banzon (2013) Unang Yakap is about health systems. EINC is more than just pediatricians taking care of newborns; it is a choreographed set of actions requiring team effort from health professionals—obstetricians, anesthesiologists and pediatricians alike, administrative/support staff of the birthing facility and the mother's family. Thus, failure to implement does not mean failure of one, but failure of the system.

Cultural barriers as a hindrance to the proper implementation of the EINC Protocol should be addressed in the context of Philippine setting. Masters (2008) conducted a study in India to evaluate the effectiveness of the Essential Newborn Care Package in reducing neonatal sepsis. Findings in this study are consistent with priorities in nursing practice which emphasis recognition of cultural influences of care. The study concluded that although the Essential Newborn Care Package is recognized as having had some impact on reducing neonatal sepsis in India, the conclusion of this critical review is that mechanisms employed for the implementation of the Essential Newborn Care Package were inappropriate for the context of India, thus undermining program efficacy. Recommendations were made for future practice and the development of policy, outlining clear delineation of health care workers roles and the responsibilities of services for the provision of a care continuum. Development of nursing practice requires research to identify and evaluate socio-cultural, environmental and behavioral variables which influence neonatal health for the development of operational strategies that exhibit socio-cultural sensitivity.



Table 4 : Frequency and Percentage Distribution, Extent of Implementation of EINC Protocol in Terms of Steps/ Procedure for Intrapartum Care According to Labor Room Staff*

Steps/ Procedure Intrapartum Care	5		4		3		2		1		Mean	
	Always		Often		Sometimes		Seldom		Never			
	F	%	f	%	f	%	f	%	F	%	V	I
1. Assess client at the start of labor	29	85.3	2	5.9	3	8.8	0	0	0	0	4.8	A
2. Use partograph to monitor progress of labor	12	35.3	4	11.8	0	0	9	26.5	9	26.5	3.0	O
3. Wash hands before and after care of each client	30	88.2	4	11.8	0	0	0	0	0	0	4.9	A
4. Monitor progress of labor	29	85.3	2	5.9	3	8.8	0	0	0	0	4.8	A
5. Allow fluids & light diet during labor	12	35.3	15	44.1	5	14.7	2	5.9	0	0	4.1	O
6. Start IV only when necessary & if ordered by the attending physician	30	88.2	3	8.8	1	2.9	0	0	0	0	4.9	A

7.	Allow patient to have SO in the labor room to be present during labor	16	47.1	4	11.8	13	38.2	0	0	1	2.9	4.0	O
GRAND MEAN												4.4	A
Mean LEGEND:		Always (A)		4.3 – 5.0		v =		Value					
		Often (O)		3.5 – 4.2		I =		Interpretation					
		Sometimes (SO)		2.7 – 3.4									
		Seldom (SE)		1.9 – 2.6		*n=		34					
		Never (N)		1.0 – 1.8									

34 respondents who were assigned in the Labor Room of the five hospitals under study were surveyed to determine the extent of their application of the seven steps/procedures for intrapartum care in the Labor Room. The findings indicates that generally the steps/procedures under intrapartum were 'always' applied by the respondents with a grand mean of 4.4. Four out of the seven steps/procedures under intrapartum care were 'always' applied while three steps were 'often' applied. Based on ranking, the procedures of 'washing hands before and after care of each client' and 'starting IV only when necessary and if ordered by the attending physician' were the mostly applied steps under intrapartum care in the Labor Room with a mean score of 4.9 for each of the procedures.

On the other hand, procedure of 'using partograph to monitor progress of labor' was the least applied step under intrapartum care in the Labor Room with a mean score of 3.0. This finding is consistent with the findings of a study by Kaur, et. al. (2010) which was conducted to assess the frequency with which the use of partograph could be used to monitor the progress of labor. It was found out in that study that the use of partograph with stringent evaluation and recording frequency is not feasible under normal labor and delivery room conditions unless 1:1 nursing care is available. However, EINC promotes the use of the old reliable partograph so that any trained birth attendant can track the progress of labor and refer complicated

pregnancies as early as necessary. According to Banzon (2013), it is easily implementable, be it the rural health unit, to lying-in clinic and even the hospital setting

It is also significant that thirteen respondents only 'sometimes' apply the procedure of 'allowing patient to have significant other in the labor room to be present during labor' and only five respondents 'sometimes' 'allow fluids and light diet during labor'. EINC desires continuous support for the expectant mother by ensuring that she has a companion while in labor and delivery and that she is able to move around easily (Banzon, 2013). Moreover, Abraham Maslow's Hierarchy of Needs states that people are motivated to achieve certain needs. When one need is fulfilled a person seeks to fulfil the next one, and so on (McLeod, 2007). When the expectant mother is denied food and drink during labor; her needs cannot be fulfilled. Hence, meeting the needs of the expectant mother is essential to a woman's emotional well-being, and important to both the physical progress and the woman's experience of birth. It can also be traumatic for a woman who feels alone, deserted, or unloved when she is taken away from significant others to be prepped in the delivery room. With so much frustration of women's needs, birth experiences can be unsatisfying and may lead to complications. Thus, for women who are able to have all their needs met at birth can be a highly satisfying event, maybe even lead to a self-actualizing experience.

Table 4 : Frequency and Percentage Distribution, Extent of Implementation of EINC Protocol in Terms of Steps/ Procedure for Intrapartum Care According to Delivery Room Staff*

Steps/ Procedure Intrapartum Care	5		4		3		2		1		Mean	
	Always		Often		Sometimes		Seldom		Never		v	I
	f	%	F	%	f	%	f	%	F	%		
1. Allow patient to have SO to be present inside the delivery room	8	25.0	4	9.4	11	28.1	7	21.9	5	15.6	3.1	SO
2. Encourage the mother to void before lying on delivery table.	17	53.1	3	9.4	12	31.3	1	3.1	1	3.1	4.0	O
3. Permit mobility & position of choice during labor	12	37.5	15	43.8	3	6.3	2	6.3	3	6.3	4.0	O
4. Turn off aircon/electric fan when patient is in the delivery room	8	25.0	8	25.0	12	31.3	5	12.5	2	6.3	3.4	SO
5. Wash hands thoroughly before and after each care	31	96.9	1	3.1	0	0	0	0	0	0	5.0	A

6. Put on double glove if handling delivery & remove first glove before cutting the cord of infant	11	34.4	6	18.8	11	34.4	4	12.5	0	0	3.6	O
7. Assist patient into a comfortable position in the delivery table, as upright as possible.	19	59.4	9	28.1	2	6.3	2	6.3	0	0	4.3	A
8. Allow the mother to push as she wishes with contractions	21	65.6	6	18.8	1	3.1	0	0	4	12.5	4.3	A
9. Provide perineal support and controlled delivery of head	27	84.4	2	6.3	3	9.4	0	0	0	0	4.7	A
10. Limit practice of episiotomy only when necessary	21	65.6	4	12.5	6	18.8	1	3.1	0	0	4.3	A
11. No performance of fundal push	8	25.0	13	40.6	9	28.1	2	8.3	0	0	3.7	O
12. Callout the time of birth & gender	30	93.8	2	6.3	0	0	0	0	0	0	5.0	A
13. Place baby on the mother's abdomen.	29	90.6	3	9.4	0	0	0	0	0	0	4.9	A
14. Administer 10 IU of Oxytocin IM within 1 minute after baby's birth	15	46.9	8	25.0	3	9.4	1	3.1	5	15.6	3.8	O
15. Perform controlled traction when delivering placenta with counter traction on the uterus	24	75.0	5	15.6	2	6.3	0	0	1	3.1	4.5	A
16. Massage the uterus after placental expulsion	26	81.3	3	9.4	3	9.4	0	0	0	0	4.7	A
17. Examine and assess the lower vagina & perineum	27	84.4	3	9.4	3	9.4	0	0	0	0	4.8	A
18. Monitor the mother & the baby immediately after the delivery of the placenta	28	87.5	4	12.5	0	0	0	0	0	0	4.9	A
GRAND MEAN											4.3	A
Mean LEGEND:	Always (A)		4.3 – 5.0		v = Value							
	Often (O)		3.5 – 4.2		I = Interpretation							
	Sometimes (SO)		2.7 – 3.4									
	Seldom (SE)		1.9 – 2.6									
	Never (N)		2.0 – 1.8									

Table 4 shows the extent of the application of the steps/procedures for intrapartum care among the Delivery Room staff in the five hospitals under study. The findings indicates that generally, the steps/procedures under intrapartum were 'always' applied by the respondents in the care of the patients during the intrapartum period in the delivery room with a grand mean of 4.3. Eleven out of the eighteen steps/procedures under intrapartum care in the delivery room were 'always' applied while five steps were 'often' applied and two were 'sometimes' applied in the delivery room during the intrapartum period.

Based on ranking, the procedures of 'washing hands before and after care of each client' and 'calling out the time of birth and gender of the newborn' were the mostly applied procedures under intrapartum care in the delivery room with a mean score of 5.0 for each of the procedures. The findings can be attributed to the fact that washing of hands before and after providing care to the patient is a universal practice among healthcare

professionals in any healthcare setting and not limited to the delivery rooms only to prevent the transmission of microorganisms and cross-contamination between and among patients. According to the World Health Organization, the single most important measure in reducing the risk of cross-infection is effective hand hygiene by health care workers (WHO, 2009). Additionally, the procedure of calling out the name and gender of the newborn although specific to the delivery room only is a procedure that is being practiced even before the implementation of the EINC Protocol.

On the other hand, the procedure of 'allowing patient to have significant other to be present inside the delivery room' was the least applied procedure in the delivery room with a mean score of 3.1. This finding may attributed to the fact that in the Philippine setting family members were traditionally not allowed to enter in the labor room and delivery room on the premise that the woman in labor may simply adopt the sick role and take to bed. However, the central proposition of the Birth

Territory theory is that when midwives and healthcare professionals create and maintain ideal environmental conditions and maximum support is provided by significant others to the woman in labor will result in an increased likelihood that the woman will give birth under

her own power, be more satisfied with the experience and adapt with ease in the post birth period which is exactly what the Essential Intrapartum and Newborn Care (EINC) protocol intends to accomplish.

Table 5 : Frequency and Percentage Distribution, Extent of Implementation of EINC Protocol in terms of Steps/ Procedure of Newborn Care According to NICU Staff*

Steps/ Procedure Newborn Care		5		4		3		2		1		Mean	
		Always		Often		Sometimes		Seldom		Never			
		<i>f</i>	%	<i>F</i>	%	<i>f</i>	%	<i>f</i>	%	<i>F</i>	%	<i>V</i>	<i>I</i>
1.	Thorough drying of baby for 30 seconds	33	100	0	0	0	0	0	0	0	0	5.0	A
2.	Assess breathing of baby & perform resuscitation when needed	31	93.9	1	3.0	1	3.0	0	0	0	0	4.9	A
3.	Place the baby on mother's abdomen for skin-to-skin contact	27	81.8	4	12.1	2	6.1	0	0	0	0	4.8	A
4.	Place baby in prone position to drain secretions	27	81.8	6	18.2	0	0	0	0	0	0	4.8	A
5.	Clamp the cord using plastic sterile clamp 2 cm from the base	32	97.0	1	3.0	0	0	0	0	0	0	4.9	A
6.	Clamp using forceps 3 cm from the plastic clamp	32	97.0	1	3.0	0	0	0	0	0	0	4.9	A
7.	Cut the cord 2-3 minutes after the delivery of the baby or when cord pulsation stops	28	84.8	4	12.1	1	3.0	0	0	0	0	4.8	A
8.	Discard the wet cloth use to dry baby	32	97.0	1	3.0	0	0	0	0	0	0	4.9	A
9.	Wrap the mother & baby with linen	23	69.7	7	21.2	3	9.1	0	0	0	0	4.6	A
10.	Put bonnet on baby's head	22	66.7	8	24.2	2	6.1	1	3.0	0	0	4.6	A
11.	Apply name tag on baby's ankle	31	93.9	1	3.0	1	3.0	0	0	0	0	4.9	A
12.	Initiate early breast feeding	21	63.6	11	33.3	1	3.0	0	0	0	0	4.6	A
13.	Monitor both baby and mother	30	90.9	3	9.1	0	0	0	0	0	0	4.9	A
14.	After 60mins of skin-to-skin contact and adequate latching on, do eye care, PE, weigh, measure, inject Vitamin K, Hepa B vaccine, BCG	29	87.9	3	9.1	1	3.0	0	0	0	0	4.9	A
15.	Non separation of baby from mother.	29	87.9	3	9.1	1	3.0	0	0	0	0	4.0	O
16.	Transport both mother and baby to room together.	11	33.3	11	33.3	5	15.2	4	12.1	2	6.1	3.8	O
GRAND MEAN												4.7	A
Mean LEGEND:		Always (A)		4.3 – 5.0				v = Value					
		Often (O)		3.5 – 4.2				I = Interpretation					
		Sometimes (SO)		2.7 – 3.4									
		Seldom (SE)		1.9 – 2.6				*n= 33					
		Never (N)		3.0 – 1.8									

33 respondents who were assigned in the Neonatal Intensive Care Unit (NICU) were surveyed to determine the extent of their application of the 16 steps/procedures for newborn care in the nursery room.

The findings indicate that generally the steps/procedures for newborn care were 'always' applied by the respondents in NICU. These findings can be attributed to the fact that 25 out of the 62

respondents were assigned in NICU(40.3%) and other 8 respondents (12.9%) were rotated in the the three areas including NICU. It can be inferred that more staff are available to provide care to the newborns.

Based on ranking, the procedure of '*thorough drying of the baby for 30 seconds*' was the mostly applied procedure with a mean score of 5.0. This finding signifies that the respondents recognize the importance of drying the baby immediately after birth because the infant is extremely vulnerable to heat loss because his/her body surface area is great in relation to his/her weight and he/she has relatively little subcutaneous weight. Heat loss after delivery is increased by the cool delivery room and the infant's wet skin (Banzon, 2013).

On the other hand, the findings also shows that the respondents did not 'always' apply one of the

important mandates of EINC Protocol which is the non-separation of the newborn from the mother, not even in the nursery (Banzon, 2013). Aside from the fact that the baby must remain in skin-to-skin contact so that breast-feeding can begin immediately and skin-to-skin contact provides additional warmth to the newborn, the non-separation of the mother and newborn is essential to the development of attachment between mother and baby. According to Bowlby's Attachment Theory (1991), attachment between mother and baby had an evolutionary component; it aids in survival. He stated that "the propensity to make strong emotional bonds to particular individuals is a basic component of human nature".

Table 6 : Perceived Barriers in the Implementation of EINC Protocol & the Extent of Implementation by Area of Assignment

Tested Variables		Cramer's V Value	Computed p – Value	Interpretation
Perceived Barriers by Area of Assignment				
Physical Set-Up				
Hand washing area is not accessible	LRIC	.290	.240	NS
	DRIC	.457	.026	*
	NRNC	.140	.422	NS
Financial Constraints				
No funding available to procure needed materials, supplies and equipment	LRIC	.437	.039	*
	DRIC	.544	.006	*
	NRNC	.070	.687	NS
Lack of Key Skills & Expertise				
Lack of training/ seminar	LRIC	.249	.348	NS
	DRIC	.270	.279	NS
	NRNC	.378	.030	*
Cultural Barriers				
Others staff are doing the old already established practices	LRIC	.424	.047	*
	DRIC	.561	.004	**
	NRNC	.193	.268	NS
Peer pressure				
	LRIC	.290	.240	NS
	DRIC	.398	.065	*
	NRNC	.052	.763	NS
Perceived self-inadequacy to change				
	LRIC	.211	.433	NS
	DRIC	.142	.675	NS
	NRNC	.490	.005	**
NS – not significant ($p \geq 0.05$)		LRIC – Labor Room Intrapartum Care		
* Cramer's V is significant ($p \leq .05$ level)		DRIC – Delivery Room Intrapartum Care		
		NRNC – Nursery Room Newborn Care		

With the use of the Cramer's V Value, the respondents' perceived barriers to the implementation of EINC protocol (physical set-up; institutional support; financial constraints; time constraints; lack of resources; lack of key skills and expertise; lack of proper monitoring and evaluation; and cultural barriers) and the extent of implementation of EINC protocol in the labor room (LRIC), delivery room (DR), and nursery room

(NICU) were correlated to determine if there is a significant relationship between the variables.

The results show that out of the eight identified barriers to the implementation of EINC protocol, only the barrier in terms of '*hand washing area is not accessible*' under the physical set-up category had significant relationship with the extent of implementation of EINC protocol in the delivery room. This can be attributed to

the fact that hand washing is the most effective way of reducing the risk of transmission of microorganisms in any healthcare setting, most especially in the delivery room where the nurse or midwife who will deliver the baby and the rest of the staff assigned in the DR have to protect both themselves and the patients (mother and newborn) due to the frequency of handling large amounts of body fluids during the birth process. In an article exploring Dr. Jose Fabella Medical Hospital's transition to EINC (Miranda, 2011), Dr. Fernandez-Tan stated that a glow germ activity conducted to test the staff's hand washing practices revealed that the staff practice new proper hand washing techniques but it was not done as regularly as it should be. As a result, opportunities for contamination has been observed during delivery assessment, said Dr. Fernandez-Tan. To this effect more sinks, soap dispenser, and hand dryers were installed in the labor and delivery rooms, NICU and other key areas in the hospital.

While the barrier in terms of *'no funding available to procure needed materials, supplies and equipment'* under financial constraints category had significant relationship with the extent of implementation of EINC protocol in both the labor and delivery rooms. This can be attributed to the general lack of funding for government hospitals, which mostly derive financial support from the Department of Health. The DOH of course, has to compete with other government departments like the Department of Education and the Department of Social Welfare for budgetary allocation. On the other hand, private hospitals also have to allocate funds to various units of the hospital itself, like the ICU, Emergency Room, Out-patient Department and others. Further, a successful implementation of any program needs sufficient funding to procure the needed materials, supplies, and equipment. Even if the staff were motivated to implement the EINC protocol, they will not be able to do so without proper supplies and materials.

The barrier in terms of *'lack of training/ seminar'* under lack of key skills and expertise had significant relationship with the extent of implementation of EINC protocol in the nursery room. As cited in an article exploring Dr. Jose Fabella Medical Hospital's transition to EINC (Miranda, 2011), implementing EINC has enhanced the staff's performance of the four core-steps in a properly sequenced and time bound manner. Before EINC training, immediate and thorough drying was performed less than 30 seconds after delivery in 92% of deliveries, with a median time of 7 seconds. Repeat assessment conducted by EINC project staff in May 2011, showed marked improvement in immediate & thorough drying which was performed less than 30 seconds after delivery in 100% of babies. Likewise, early skin-to-skin contact with the baby positioned prone on the mother's chest or abdomen is already marked at mean time of 84 seconds with 100% of babies

positioned at less than 5 minutes compared to pre-training time of 153 seconds and 95% at less than 5 minutes. Prior to training, 46% of babies were separated from their mothers for newborn procedures, which were done before their first breastfeed. After training, 70% of babies completed their first breastfeed before newborn procedures were performed. Consequently, this has resulted to an improvement in breastfeeding support with 40% of babies delivered breastfeeding within an hour compared to only 4%, pre-training. Other notable improvements in newborn care that were observed since the hospital has implemented EINC include elimination of unnecessary suctioning, revision of criteria for admission to the potentially septic unit, and the use of self-monitoring tools for roomed-in newborns -- elimination of air draft in the delivery area, reduction in separation of mother from baby from 46% to 20%. However, Fabella's transition to EINC required a number of changes and adjustments. As the saying goes, *'old habits die hard.'* Constant push and convincing had to be done to ensure that the medical and nursing staff along with the consultants abide by the new protocol. Hospital memos, orientation and training of all hospital staff were done to ensure that complete implementation was achieved. EINC training was included in the orientation of the hospital's new residents, nursing trainees, and even students and volunteers from accredited schools were also required to attend the EINC training/orientation workshops.

As to cultural barriers, in terms of the staff's resistance to adopt the new protocol, *'others staff are doing the already established practices'* was highly correlated with the extent of implementation of EINC protocol in the labor room and delivery room while peer pressure was moderately correlated with the extent of implementation of EINC protocol in the delivery room only. On the other hand, the cultural barrier in terms of the staff's perceived self-inadequacy to change *'perceived self-inefficacy to change'* was highly correlated with the extent of implementation of EINC protocol in the NICU. This can be interpreted to mean that since the concerned staff feels that he or she lacks adequate training to acquire skills and expertise required to implement the EINC protocol then it would follow that there will be a natural resistance to adopt to new procedures and instead continue to follow established practices which the respondents feel more comfortable in doing.

VI. CONCLUSIONS AND IMPLICATIONS OF THE STUDY

This study provided useful information on the barriers to the regular implementation of EINC protocol that could have an impact to the extent of its implementation in health care institutions, be it the rural health unit, lying-in clinic and even the hospital setting. In line with the foregoing findings, the following

conclusions have been reached: The staffs were generally applying the steps/procedures in the EINC protocol in their respective units/areas however there are barriers to its regular and full implementation. Some of the more significant barriers have been identified in the findings. The leaders of health care institutions must therefore, take the necessary steps to mitigate the effects of these barriers. Such steps will insure that the EINC protocol is religiously followed and implemented.

Assuring the delivery of key evidence-based interventions during childbirth is critical to optimizing care for women and newborns. Thus, the need for a paradigm shift from the prevailing standard procedures into the new EINC protocol cannot be over emphasized. The findings underscore the need for healthcare institutions to strengthen their information drive on EINC which can result to its increased implementation which can in turn lead to improved quality of care delivered by health workers attending to institutional deliveries. This may involve engaging and empowering the staff; providing education on best practices and existing deficiencies; discussing potential barriers and introducing the EINC protocol through focused training; and establishing a mechanism for ongoing monitoring and evaluation.

Although it has provided important information on the sources of EINC knowledge that could influence the extent of its implementation, this study has a number of limitations. Firstly, the study relied on respondents' self-reported data, which is prone to bias. Second, the research method did not include a qualitative component which could have strengthened the study by providing reasons why some things are not done the way they should be done. Another limitation of this study is the sample size. There is no previous statistical correlation of the sample size to any similar study that could have validated the findings as definitive of the state of EINC protocol implementation in private and public hospitals.

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