



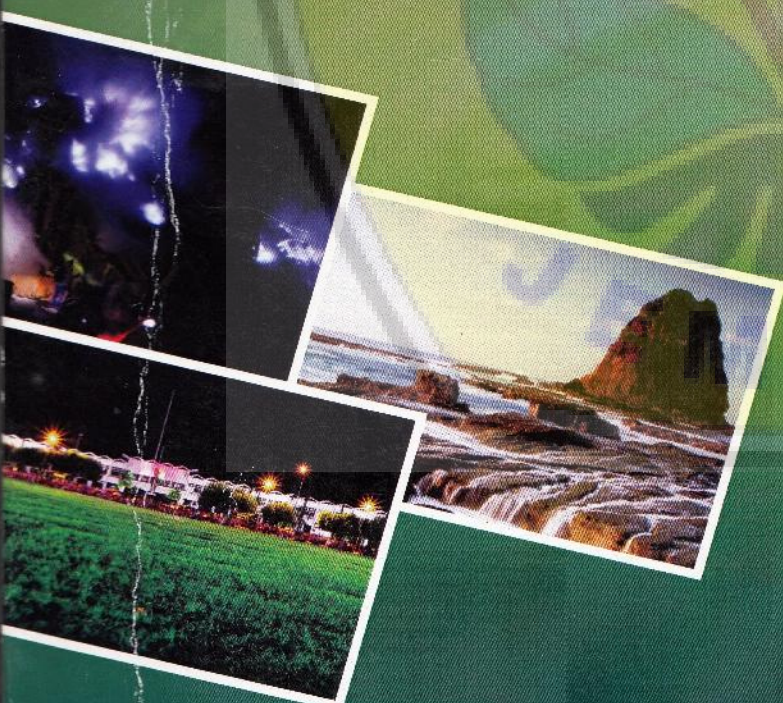
ISBN : 978-602-9030-82-2

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# PROCEEDING

## 2<sup>nd</sup> International Nursing Conference

**Nursing Role  
for Sustainable Development Goals Achievement  
Based On Community Empowerment**



November 14<sup>th</sup> - 15<sup>th</sup> 2015  
Jember - East Java Indonesia

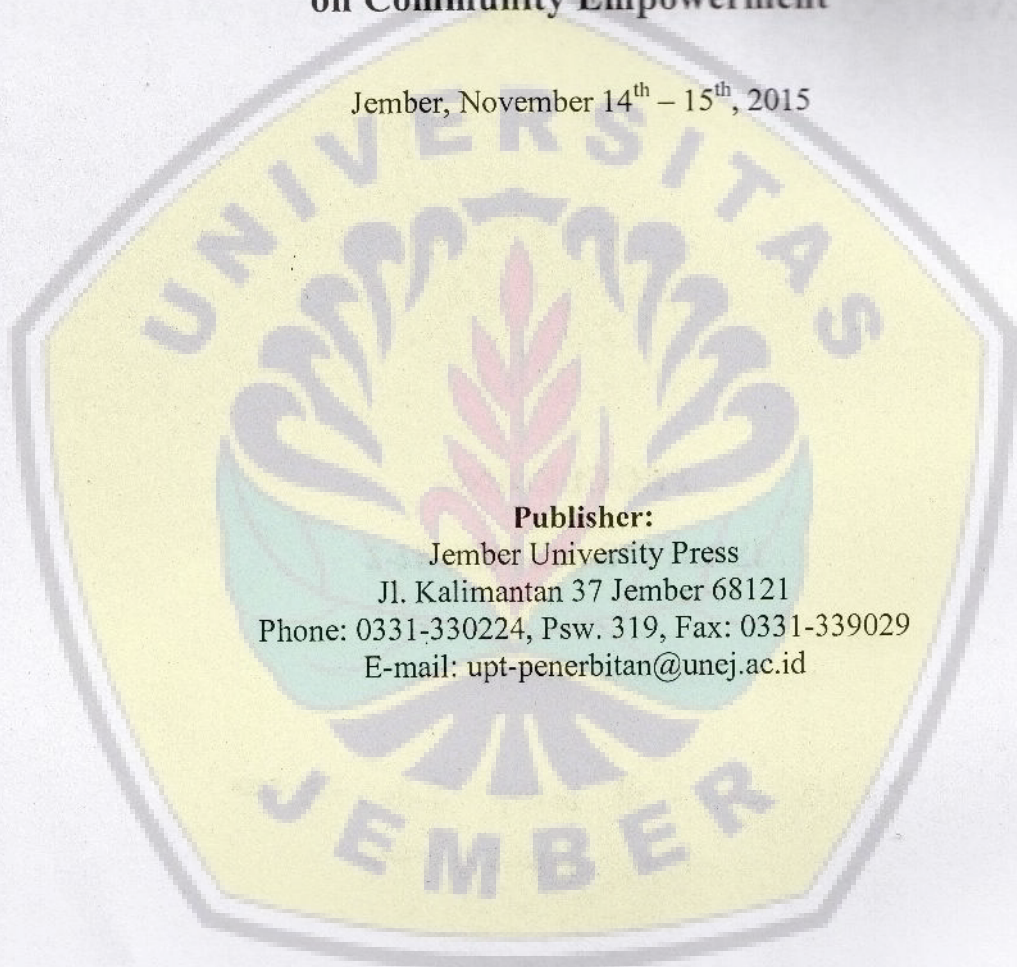




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**Publisher:**

Jember University Press

Jl. Kalimantan 37 Jember 68121

Phone: 0331-330224, Psw. 319, Fax: 0331-339029

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**ISBN: 978-602-9030-82-2**



# NURSES EXPERIENCE IN THE INITIAL DECISION TO PERFORM RESUSCITATION ON CRITICALLY PRETERM NEONATE

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## ABSTRACT

**Background:** Nurses as the first responder of cardiac arrest and stopped breathing incident in premature neonates has the responsibility to decide resuscitation immediately. Accuracy and speed of initial decision making are needed to improve the success of resuscitation, many things that affect the initial decision-making in resuscitation, but studies related to the experience of nurses in the initial decision-making of resuscitation has not been widely studied. The research objective was to explore the experiences of nurses in making the initial decision to perform resuscitation in critical ill preterm neonates in neonates ward. **Methods:** The design study is qualitative interpretative phenomenological approach. Deep Interview had used open ended questions involved 6 nurses in neonatal ward. Data were collected and analyzed using thematic analyzed approach based on Braun & Clarke, 2006. **Results:** The study resulted in two themes, namely early detection of emergency and intuition nurse. Early detection of emergency can be used as consideration for the nurses to be ready to face the possibility resuscitation can occur at any time, thereby reducing the risk of death and disability in premature neonates. Intuition nurse built from experience, sensitivity and automation of action. Intuition nurse can shorten the time and accuracy of initial decision making in resuscitation. **Conclusion:** The initial decisions nurses in neonatal resuscitation require accurate of early detection and sharp intuition of nurse to obtain optimal results in preterm neonate resuscitation.

**Keywords:** resuscitation, preterm neonates, initial decision, experience of nurse

## Introduction

Resuscitation is an action taken to save lives because of cardiac arrest. Neonatal resuscitation can occur in two situations, in the delivery room or in the neonatal intensive care (Karlłowicz, Karotkin, & Goldsmith, 2011). Neonatal condition that most at risk of cardiopulmonary urgency in the neonatal intensive care is due to cases of prematurity. This is because the neonate organs are still immature and organs functioning improperly, especially the lungs and other cardiopulmonary system. Immaturity of the respiratory system can be events caused a respiratory distress

syndrome that can lead to life-threatening breathing stopped neonate itself (Lawn *et. al.*, 2012; Kattwinkel *et. al.*, 2010).

Every year there are 15 million neonates born with condition and prevalence of premature mortality and morbidity varies from the whole country in the world. Whereas in developing countries there are 3.8 million neonates born prematurely and has a mortality and morbidity rates are still high, so that the developing countries into the causes of preterm neonate mortality in the world (Lawn *et al.*, 2012).

Early detection of critical condition of cardiopulmonary system is one of the most



important actions for reducing death and disability. Delay of 1 minute can reduce 10% of the life expectancy (Hunzier, *et al*, 2011). In general, nurses always be the first responder of the first occurrence from cardiac arrest and initiate early action resuscitation while waiting for the resuscitation team advanced resuscitation (Terzi, 2008). Nurses are required to have a quick response in setting and resuscitation, so that nurses have three responsibilities when caring for neonates who are at high risk of severity that can detect the early presence of critical ill in preterm neonates and prevention of cardiac arrest, begin resuscitation if there are any changes in conditions newborns can be life threatening and actively acted as a member of the resuscitation team, as well as assistance to families experiencing resuscitation (Terzi, 2008; Biban, Soffiati, & Santuz, 2009).

But research into the role of nurses in decision-making early resuscitation in preterm neonates qualitatively still rare, there is a general resuscitation research using quantitative approach. Phenomenon that occurs above, it would require an approach to explore the experience of nurses in making the initial decision to perform resuscitation in critical ill preterm neonates, so we get a more complex picture that can be searched for the best solutions for improving the quality of resuscitation were performed.

This research is important because the complexity of the decision-making early in the implementation of resuscitation. The involvement of nurses as health professionals involved in resuscitation team will certainly provide a special meaning for them. So that the general

purpose of this study was to explore more deeply to the experience of nurses in decision making early resuscitation in critical ill preterm neonates.

## Methods

This research is qualitative interpretative phenomenological approach (Polit & Beck, 2014; Schneider *et. al.*, 2007; Speziale & Carpenter, 2007). Research conducted in the neonatal ward in government hospital of Lumajang. The selected participants in this study were 6 neonatal nurse who met the inclusion criteria that have a minimum education of three nursing diploma, a certificate of training NICU at least 3 months prior to the conduct of research, and willing to be a participant. Once participants sign a form willingness to be a participant, the researchers and participants agree on a time and place to do interviews. Data were collected through interviews using open-ended interview with questions for 30-60 minutes. Research in analyzed using analysis of thematic Braun & Clarke through six stages, namely familiarizing yourself with your data, generating initial codes, searching for themes, reviewing themes, defining and naming themes and producing the report (Braun & Clarke, 2006). The research was already getting feasible ethical clearance from etic Commission of Faculty of Medicine, Brawijaya University. Researchers use the term "p" to replace the participants delivered a statement on the interview, for example p1 to participants 1.

## Results and Discussion

Results of research related to the initial decision-making nurses in resuscitation in preterm neonates resulted in two themes,



namely early detection of emergency and intuition of nurse.

Nurse early detection of emergency to be able to predict the existence of conditions that can be life threatening before the initial decision-making. This initial decision-making process is an attitude that must be taken quickly and precisely due to delays in decision-making can reduce the life expectancy of the percentage of neonates requiring intuition nurses in doing so.

The first theme of the decision-making early is early detection of emergency an assessment as early as possible to the conditions which endanger the lives of premature neonates. Early detection of urgency expressed by all participants to see a history of previous conditions. Sub-themes of the early detection of emergency consisted of neonates at risk of the condition, history of labor, referral history, and periodic observation.

Statement of the participants of the sub-theme of neonates at risk expressed by some participants stating the initial conditions of entry. The participants mentioned the condition of neonates at risk by mentioning the neonatal conditions such as preterm neonates, low birth weight, prematurity, cyanosis, severe asphyxia, severe retraction, gasping, bleeding stomach, and hypothermia. Statement of the participants can be seen from the five participants representing the other participants, namely:

*"Usually when NPBBLR yes miss although good AS we cation 6,7,8 oxygen, not know if it's okay, what masks, or CPAP nasal or headbox, then, that from the beginning*

*conditions are good, then arrived - arrived fell to conditions as it is usually the time yes, about once weekly then clearly affect its gestational age, ee, then the baby's weight as well, but there is also the newborns had severe asphyxia, is not directly to the oxygen, it is also much faster usual, and condition cyanosis, indeed need resuscitation arrived - arrived gasping or arrived - arrived vomiting that usually, is, yes, the address "(p2)*

*"Hypothermia is also the urgency that had to be in, should need very strict observation. If in the beginning - the beginning I thought that hypothermia baby, yes alright like babies of Perin regular, ordinary term if it is for the risk he was discharged from hypothermia to a heart condition to condition stop breathing it may still only 20% can happen, in fact it turns right instead easy baby hypothermia was easy to fall into cardiac arrest as well stop breathing as well."(p3)*

*"Yes it is if it's the title is premature?, Premature was the condition of his lungs, his heart right does not maximized yes it works, so...be retracted weight, can at any time - indeed, usually coupled with hematin, what, this condition, yes, then, NGT fluid began to green, what red, yellow so it means what has been, from the condition began, both the less so,"(p6)*

The revelation of the above participants revealed that neonates above conditions can be used as an early warning that may be at risk of falling in emergency conditions. Participants also revealed that the condition of the critical of breath and



cardiovascular not occur suddenly but preceded by others condition such as body temperature is lower than the normal range (hypothermia), the color of bluish skin (cyanosis), gastric fluid brownish color seen in the feeding tube that is inserted into stomach (hematin/bleeding of the stomach), chest wall movement is strong and visible (retraction), suddenly stopped breathing for a moment and then breathe again (gasping). Conditions above a marker that will occur in critical cardiopulmonary of premature neonates.

The next sub-themes of the early detection of emergency is the history of labor in the preterm neonates. History tells about the history of the birth of the neonates born in the world. History of childbirth may be how the newborn is born (vacuum extraction, and section sectarian), the state of mother during the birth process (obstructed, women with high blood pressure, and women with bleeding) and neonate condition during parturition (severe asphyxia, and history since lack of oxygen in the womb).

The participants are able to assess the condition of subsequent neonatal by using the guidelines of the way neonatus born prematurely. Quote the statement of participants can be seen below

*"Meaning, ee, spontaneously what vacuum, the LBW right if sometimes there is a vaccum, then ee, with operations also (p2)*

*"Yes we see also... usually labor risks also need to be aware of for instance born with vacuum what SC operations so" (p3)*

The participant statement hinted that they are very concerned about labor history that

may cause the risk of severity in critical ill of preterm neonate Result of the aid delivery process may lead to the possibility that bad for the newborn and it should be wary of.

The third sub-theme of the theme of early detection is the emergency of the condition of the mother during delivery. The condition consists of prolonged labor, obstructed, and women with high blood pressure. Some excerpts participants mentioned mother's condition at birth can affect the incidence of severity in neonates is "

*"Then the birth process also influences such as prolonged labor, or obstructed, sometimes right could also affect, Apgar also," (p2)*

*"Yes, and than also we have to know the history - a history, a history of birth, history was born, that history for, her condition in the womb I also just know, I guess right all the premature equal yes, apparently prematurely, there were mothers - women who obtained fitting assessment, his mother suffered for example, may be PEB disease that's already urgency" (p3)*

Participants statement above described that the emergency condition of preterm neonates does not occur suddenly and abruptly, but there are several factors that can influence it. A mother with a history of gravity can also cause a risk of severity of neonatal early beginning of live. This occurs because the newborn since the beginning of its birth in a state of lack of oxygen to the organs of his body.

Historical references are four sub-themes of the theme of early detection of



emergency. Not all preterm neonates born at the hospital, some of them is a reference to health centers, private hospitals, private midwife, clinic or even give birth alone at home and then immediately taken to the emergency room. The referral process is a way to send neonates from the place of delivery to the hospital. This is done because of premature neonates not yet mature enough to live outside the womb without tools to stabilize his condition.

But in practice this referral process did not observe the requirement to submit these neonates. Some rules that must be considered in this referral process, it must be met at the time of the neonates before being shipped, during the trip and at the beginning of the ER is received at the hospital. Some of the referral process is not met, eg initial preparation before being sent which should prepare the temperature and respiratory care premature neonates. Another thing that is overlooked during the referral process, which at the time delivering neonates without equipped with breathing apparatus and without adequate thermal protection. This condition can be seen from the expression of statements made by the participants are:

*"Eee, sometimes right there from the midwife who had no oxygen, so even though LBW, he not has oxygen, continue to be directly sent also The distances location of the point of reference also affect the condition of the neonate" (P2)*

*"Then also the condition that such a referral from remote areas where the referrer not understand how ee, transport baby brought her the baby was how, that I bring for the trip as it was also the mem, what, wasting a lot of time, then, baby also, what, the*

*longer experienced conditions - conditions like hypothermia hipoksi too long too long, during the trip, "(p3)*

*"Could, right hypothermia also affects, for example if yes what, mails should be right with the right to be let alone premature warm condition, let alone from here to the far right as well hypothermia." (P4)*

Excerpt from the statement above three participants illustrates that the referral process should be in accordance with the procedures that can reduce the impact of circumstances too low temperatures and lack of oxygen in the long term.

The fourth sub-themes that can increase alertness participants in predicting the existence of gravity in neonates is the act of monitoring periodically and continuous obtained when conditions are at risk for premature neonates critical of the previously described. This can be seen from the statement following participants:

*"Indeed we have often observed even when briefly, Heem, often we see the observation of at least 2 hours, 1 hour, much less is the condition the baby needs attention really, .often we see, so we're not missed too, saw its clinical decline was not missed (stolen) and caregivers should really how ya, Eeee often so that often clinical study again see the baby and let the baby learn that not keblendrang (abandoned) the term yes."(P1)*

*"Half an hour right we often, evaluation, check, check, vital sign yes"(p3)*



The statement above shows that less intensive supervision led to a higher risk of death in premature neonates. Participants disclose that the late found in conditions of emergency of the smaller life expectancy.

Periodic observation is required to detect as early as possible urgency that can occur so as to minimize the complications caused by the gravity of the respiratory and cardiovascular systems. Assessment often and repeatedly for evaluation can improve the success of resuscitation (Kattwinkel *et al.*, 2010). Early detection of the critical of the cardiopulmonary system is one of the most important actions for reducing death and disability. Delay of 1 minute can reduce 10% of the life expectancy (Hunzier *et al.*, 2011).

The second theme of the initial decisions are nurses intuitive. Activity decide an activity that is not easy, it takes a wide range of considerations and the courage to take a stand on an issue or event, so that the necessary policies and precision to decide. Nurse Intuition is the sharpness of feelings and thoughts nurses against a patient's condition so that the nurse can determine attitudes to quickly and accurately follow their hearts without having to go through a longer process in the brain.

Intuition is comprised of sensitivity nurses and automation action. Sensitivity nurse is sensitive to stimuli that is, in the initial decision-making required unpleasant sensitive to a wide range of neonatal conditions that can be predicted to experience gravity. Risk assessment neonatal conditions requiring the sensitive feelings of a nurse to respond quickly and

appropriately. This is consistent with nurses statement below:

*"As long as I maintain, for my work as a nurse in the neonatal was, in my opinion, eemm, I think it's different, working in the neonate, the same people who work in the adult yes, because it is right yeah baby, we know babies can not just talk, eeemh, Only silent, so sometimes we use the feeling "(p1)*

*"by be ...are often exposed resuscitation typically more responsive, more quickly respond," (p3)*

*"ee, may be faster that now yes yes yes maybe yes because it may have already learned so much, if used, such infants need resuscitation not ... yes, it's still not sure "(p2)*

The above statement expressed sensitivity to the action using the phrase feeling and sure. The phrase says feeling means inner consideration (heart) over something, it is stated that nurses who are experts not only use rational and logical but also involves the mind / heart in decision making. A nurse feeling will only arise if always trained or exposed to the same events so that nurses have a particular sensitivity more faster response than receipts logic /reasoning. While sure has a sense of feeling certainly have no doubt decisions and actions. A nurse who has expertise not only purely a hold decision-making logic/reasoning but use the feelings and convictions would be something that could speed up the decision making process to determine the immediate life-saving action.

Automation of human action is the rapid response by the incoming stimuli that are



directly processed to obtain results. This automation mimics the way machines work directly entering data and processed quickly to get results. Skilled nurses are required to make decisions quickly and accurately because they already has the basic data collection is complete and accurate as the process that occurs in the machine. Similar statements are in accordance with the above terms expressed by the participants as follows:

*"What can be a decisive step - a step that would be, what, precisely and carefully, mem, predict and take steps later that what really until that is also what, the sequence - the order was also prescribed pattern." (p3)*

*"Quote the science base is strong, it means already know the steps, steps, like what we have been ready" (p6)*

*"Iyalah, because of because it is not accustomed to, so this must be how so yes, it loading (velocity relationship) longer than the already common practice, so maybe thinking so much longer" (p5)*

Participant statements above illustrate that the expertise of nurses in the track as early as possible the gravity of neonatal nurses urgently needed as skills when working in the neonate. The words to express automation actions disclosed are patterned and loading (speed level relationship). Pattern means a system or way of working, so naturally skilled nurses who work without undue difficulty because they is used to work with the system. The second word used to describe the automation of the action is "loading" contextually that have meaning in a sentence is the speed in the relationship. The word "loading" give the sense that a skilled nurse she should have the speed to understand the events

and can immediately provide a response to overcome the problems. Finesse and quick response of nurses can be useful for making decisions quickly and precisely in terms of determining the gravity of the act that requires resuscitation.

Preterm neonates have some risk due to immaturity of the organs that have had a lung that immatur thus have difficulty to ventilation and the risk for injury when given positive pressure ventilation. Prematurity organ systems in preterm neonates cause a condition that can be life-threatening, such as immaturity of the respiratory system caused RDS, the skin is thin and transparent and immaturity of the immune system also causes neonatal susceptible to infection and sepsis, and when added conditions of hypothermia, hypoglycemia and hypoxia, it will cause gravity cardiovascular requiring resuscitation (Lawn *et. al.*, 2012; Kattwinkel *et. al.*, 2010). Similarly, the low birth weight are usually associated with the condition and have the same problems with prematurity.

Asphyxia condition is a complex combination of hypoxemia, hypercapnia, and circulatory insufficiency that can be caused by a variety of perinatal risk factors (eg, placental insufficiency, placental abruption, respiratory failure, meconium aspiration, pneumothorax, blood loss, etc.). Conditions hypoxemia, hypercapnia, and circulatory insufficiency if it lasts a long time can cause permanent damage to the central nervous system, or damage to other organs that can cause failure of the respiratory system that can fall on the gravity of the respiratory and cardiovascular systems (Karlłowicz *et al.*, 2011).



Conditions cyanosis, gasping and retraction of the chest wall is a sign of respiratory distress in preterm neonates. Severe breathing problems often experienced by preterm neonates because of a shortage of surfactant. Surfactant function is to reduce the surface tension and helps to stabilize pulmonary alveolar wall so it does not collapse at the end of the breathing. The absence of surfactant causes respiratory alveoli collapse each end, which causes difficult breathing. Before the age of 34-35 weeks gestation, surfactants are often not produced insufficient quantity so as to result in atelectasis, and can progress to respiratory distress syndrome (Chapman & Cholson, 2010). This respiratory distress syndrome if not promptly treated can be increased to stop breathing that can be life threatening.

Hypothermia can be a risk factor for respiratory and critical cardiovascular, because if a baby was cold, he will begin to experience hypoglycemia, hypoxia and acidosis (Chapman & Cholson, 2010). A combination of three factors caused by hypoxic conditions is hypoglycemia, hypoxia and acidosis may stimulate increases the need for oxygen that the body tries to increase the frequency of breathing and heart rate, and if it can not adapt well due to immaturity of organ systems that premature neonates may fall on conditions respiratory failure and cardiac arrest (Karlowicz *et al.*, 2011).

How to detect the early presence of gravity in preterm neonates is of the history of childbirth. Delivery by secaria secio may risk causing respiratory depression in neonates due to the use of anesthetic drugs during delivery (Karlowicz *et al.*, 2011).

Labor history with prolonged labor or obstructed at risk of neonatal hypoxic events during intrauterine, and most likely can continue in tissue hypoxia after delivery becomes a risk factor for neonatal asphyxia (Karlowicz *et al.*, 2011).

Historical references can also be used for early detection of gravity in preterm neonates. Referrals that do not conform to standards such as referring regardless of the temperature setting guidelines resulting in hypothermia, referring without using oxygen, causing tissue hypoxia and the location of a place of reference that can considerably increase the incidence of hypothermia and hypoxia in preterm neonates (Karlowicz *et al.*, 2011).

Nurses intuition consisting of sensitivity, and automation of the action. The results are consistent with previous research that nurses who are experts more quickly and accurately in decision-making than the novice nurse. This is due to expert nurses collected data on more and more focus on the problems of patients and expert nurses more proactive in data collection. The collected data was the better nurse expert in categorizing the data so that better decision making (Hoffman *et.al.*, 2009). Another opinion supporting that the decision was influenced by the intuasi is Patricia Banner opinion with his theory Novice to expert in 1982, which said that work performance is influenced by experience and education. There are five levels of experience nurses are novice, advanced, beginner, competent, proficient and expert. This intuition would be obtained if the nurse had been at the level of experts. Expert nurses, that nurses no longer rely on rules and guidelines, the nurse working becoming more fluid.



flexible and natural to rely on intuition as already experienced the same situation, though expert nurses still rely analysis when dealing with a situation that has never faced before (Banner, 1982).

### Conclusions

Early detection of emergency an assessment as early as possible to the conditions which endanger the lives of premature neonates. Early detection of urgency expressed by all participants to see a history of previous conditions. Sub-themes of the early detection emergency consisted of neonates at risk of the condition, history of labor, referral history, and periodic observation. The determination of appropriate action on the critical ill of preterm neonate nurse requires intuition built from experience, sensitivity and automation of action, so the nurse's steps in the handling of the critical ill of preterm neonate can deliver perfect outcome.

### References

- Benner, P. (1982). From novice to expert. *The American Journal of Nursing*, 82(3), 402 - 407.
- Biban, P., Soffiati, M., & Santuz, P. (2009). Neonatal resuscitation in the ward: the role of nurses. *Early Human Development*, 85, S11 - S13.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research i Psychology*, 3(2), 77 - 101.
- Chapman, R. L., & Cholson, E. R. (2010). *Perinatal Physiology*.
- Hoffman, K., A, Aitken, L., M, & Duffield, C. (2009). A comparison of novice and expert nurses' cue collection during clinical decision-making: Verbal protocol analysis. *International Journal of Nursing Studies*, 46, 1335-1344.
- Hunziker, S., Johansson, A., Tschan, F., Semmer, N., Rock, L., Howell, M., et al. (2011). Teamwork and leadership in cardiopulmonary resuscitation. *Journal of the American College of Cardiology*, 57(24), 2381 - 2388.
- Karłowicz, M., Karotkin, E., & Goldsmith, J. (2011). Resuscitation. In E. Karotkin & J. Goldsmith (Eds.), *Assisted Ventilation of the Neonate* (4 ed., pp. 71 -93): Saunders.
- Kattwinkel, Jeffrey, Perlman, Aziz, K., Colby, Fairchild, et. al. (2010). Part 15: Neonatal resuscitation: 2010 American heart association guidelines for cardiopulmonary resuscitation and emergency cardiovascular care. *Circulation*, 122, S909 - S 919.
- Kattwinkel, J., Perlman, J., Aziz, K., Colby, C., Fairchild, K., Gallagher, J., et al. (2010). Neonatal resuscitation: 2010 American heart association guidelines for cardiopulmonary resuscitation and emergency cardiovascular care. *Pediatrics*, 126, e 1400.
- Lawn, Devidge, Paul, Xylander, Johnson, & Costello. (2012). Care for the preterm baby. *In born too soon the global action report on preterm birth*. In. Geneva: WHO.
- Polit, D., & Beck, C. (2014). *Essentials of nursing research appraising evidence for nursing practice* (4 ed.). Philadelphia: Lippincott Williams & Wilkins.
- Schneider, Whitehead, Elliott, Wood, & Haber. (2007). *Nursing &*



*midwifery research methods and appraisal for evidence base practice* (3 ed.): Mosby elsevier.

Speziale, H., & Carpenter, D. (2007).

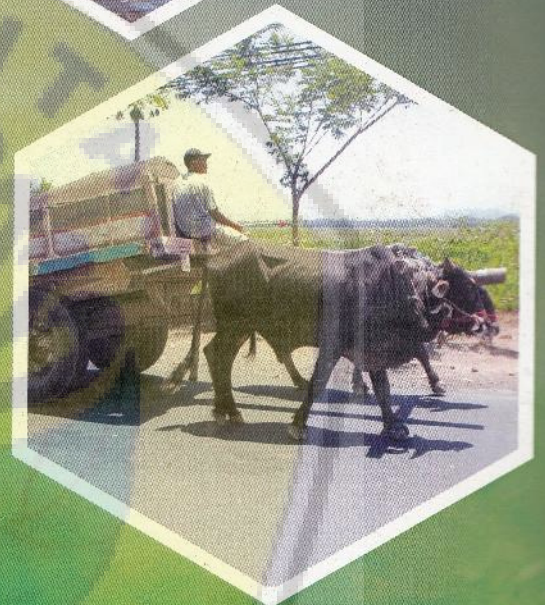
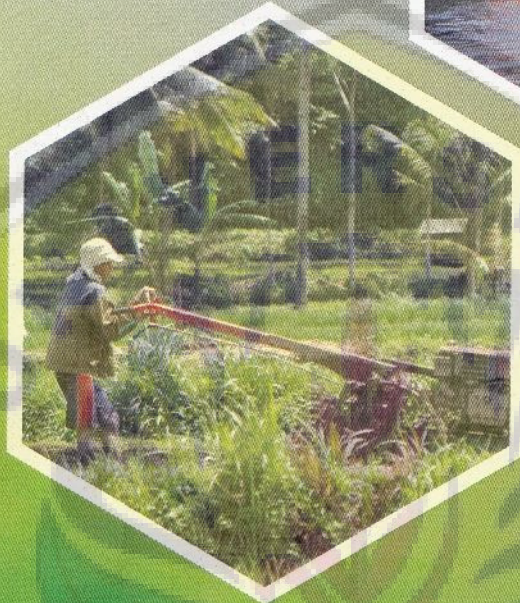
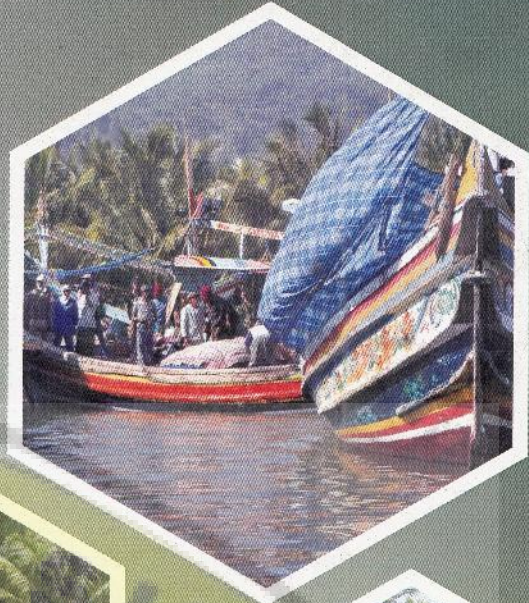
*Qualitative research in nursing: advancing, the humanistic*

*imperative* (3 ed.). Philapdhelpia: Lippincott Williams & Wilkins.

Terzi, AB.(2008). *Nurse's role in the modern resuscitation era*. Hospital Chronicles: Supplement: 16-19







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