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Development and Evaluation of a Skin-To-Skin in the Operating Room Protocol

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Development and Evaluation of a Skin-To-Skin in the Operating Room Protocol

Abstract

This article describes the development and evaluation of a skin-to-skin in the operating room protocol. A protocol would standardize the practice of skin-to-skin in the operating room and provide a resource for the team members involved to use. The protocol evaluation and feedback was obtained from several members of the health care team, including an obstetrician, an anesthesiologist, a pediatrician, a pediatric nurse practitioner, and nurses who work as a labor nurses, baby delivery nurses, and/or lactation nurses.

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Abstract

This article describes the development and evaluation of a skin-to-skin in the operating room protocol. A protocol would standardize the practice of skin-to-skin in the operating room and provide a resource for the team members involved to use. The protocol evaluation and feedback was obtained from several members of the health care team, including an obstetrician, an anesthesiologist, a pediatrician, a pediatric nurse practitioner, and nurses who work as a labor nurses, baby delivery nurses, and/or lactation nurses.

Keywords: skin-to-skin, kangaroo care, cesarean section, operating room, protocol development

Callouts

Skin-to-skin contact typically will occur after a vaginal delivery, but is not common practice after a cesarean delivery in the operating room. (Page 4)

Based on the results from the expert reviewers' surveys, the protocol was educational and appropriate for the target audience. (Page 10)

The protocol will standardize the practice of performing skin-to-skin in the operating room and provide a resource for the team members to use. (Page 4)

Development and Evaluation of a
Skin-To-Skin in the Operating Room Protocol

Introduction

Skin-to-skin contact is the process of positioning a naked infant on a mother's bare chest immediately or within the first hour of birth (Gouchon, Gregori, Picotto, Patrucco, Nangeroni, & DiGiulio, 2010). Skin-to-skin contact, also known as kangaroo care, began in Colombia in 1978 when there were not enough incubators for all of the premature newborns (Feldman, 2004). Stable premature newborns were placed skin-to-skin with their mothers to initiate breastfeeding and their temperature was regulated using the mother's body heat (Feldman, 2004). The newborns were continuously skin-to-skin with either the mother or other family members until they fully matured. Skin-to-skin contact has been studied immensely around the world since then and has proven to have many benefits.

Skin-to-skin contact immediately after a child is born has been shown to benefit the newborn's transition from inside the mother's womb to the outside environment and promote mother-baby attachment and bonding (Mangan & Mosher, 2012). Skin-to-skin contact supports physiologic stability for the infant. The newborn's respiration rate, oxygenation levels, glucose levels, and temperature stabilize while skin-to-skin with the mother (Phillips, 2013). A study performed in Italy found that when infants were placed skin-to-skin after a cesarean delivery, they had no significant temperature difference than an infant that was dressed and placed in a crib (Gouchon et al., 2010).

Skin-to-skin contact also influences maternal attachment behaviors. The hormone oxytocin is increased during skin-to-skin contact and increases even more when a newborn begins to massage the mother's breasts (Phillips, 2013). Oxytocin has been shown to improve

relaxation, attraction, facial recognition, and maternal care giving behaviors (Phillips, 2013), which all influence attachment behaviors. Skin-to-skin contact immediately after birth provides the infant an opportunity to advance through the nine instinctive stages, which promote a positive breastfeeding experience (Phillips, 2013), and leads to increased breastfeeding rates.

Skin-to-skin contact is the standard of care following a vaginal delivery, but it is not common practice to place an infant skin-to-skin in the operating room during a cesarean delivery. Many hospitals have implemented a skin-to-skin protocol or policy after a vaginal delivery. However, most hospitals have not developed a skin-to-skin protocol following a cesarean delivery (Phillips, 2013). Stable mothers that deliver in the operating room via cesarean section deserve the same skin-to-skin experience that mothers who deliver vaginally receive. Common barriers perceived by staff that often prevents skin-to-skin contact in the operating room include: the anesthesiologist not having immediate access to the mother if there was an emergency, inability of the nursery nurse to assess the newborn safely on the mother's chest, safely positioning the newborn while the mother is lying on the operating room table, and concerns that the newborn will become hypothermic due to the low temperature in the operating room (Mangan & Mosher, 2012).

Skin-to-skin in the operating room is a relatively new concept for many institutions and will continue to be a controversial topic of discussion. The rate of cesarean births in the United States has risen to 32% over the past decade (Menacker & Hamilton, 2010). The increased rate of cesarean births leads to more mothers not experiencing the benefits of skin-to-skin immediately after birth. Every mother desires a positive birthing experience and when a mother has to have a cesarean birth, they often are saddened that they cannot have immediate skin-to-skin contact with their newborn (Phillips, 2013). Creating a skin-to-skin in the operating room

protocol will standardize the practice of performing skin-to-skin in the operating room and provide a resource for the team members to use to perform skin-to-skin safely for both the mother and the infant.

Methods

The protocol was developed for a local hospital's birthing center located in upstate New York. The unit performs scheduled cesarean sections ranging from none to three per day, with the additional unscheduled or emergency cesarean sections as well. The development of a skin-to-skin in the operating room protocol would potentially improve the quality of care the patients receive at this birthing center and could gain local attention as the first birthing center to offer skin-to-skin in the operating room.

Specifically, the protocol's purpose is to assist the registered nurse (RN) in providing skin-to-skin in the operating room safely to both the newborn and the mother. The protocol's purpose is also to define and outline the roles and responsibilities of the RN in caring for the newborn regarding skin-to-skin in the operating room. The protocol was written in a similar format and style as the birthing unit's current protocols and policies. The protocol is outlined specifically in Appendix A. The protocol was developed using multiple evidence-based resources and current guidelines and recommendations. These resources are noted in Appendix A. Once the protocol was finished, a 5 point Likert scale survey (*strongly disagree, disagree, neither disagree or agree, agree, or strongly agree*) was developed to gather expert reviewers' opinions regarding the survey content and whether or not it was useful to the target audience.

The study received approval from the Institutional Review Board prior to data collection. The protocol developer identified seven expert reviewers to participate in the review process. The expert reviewers included physicians, nurses, and advanced practice providers who all play

an important role in both the development of policies and protocols and are active participants in the future implementation of the protocol. The expert reviewers were encouraged to complete their survey at their own convenience and were assured privacy and anonymity. A potential conflict of interest would include that the writer of the protocol is a nurse within the unit that the protocol would be implemented, and it may prevent other co-workers from expressing their honest thoughts and opinions on the protocol because it was developed by a fellow co-worker. In order to prevent this from occurring, during the future implementation and evaluation of the protocol, an online survey could be used so that the team members participating in the surveys would have complete anonymity.

The results of the surveys were then reviewed and the protocol was updated to include their suggestions and recommendations. An Excel document was used to organize and evaluate the survey data results.

Results

Skin-to-skin is performed routinely following a vaginal delivery in this birthing unit, however it is not performed following a cesarean delivery due to many barriers. These barriers include unfamiliarity of the intervention, anesthesia concerns of the safety of the mother, nursing concerns regarding access to the infant and safety of the infant on the mother's chest, and physician concern of the sterility of the field during the operation. Implementing a change within an organization can be difficult. When a job has been performed the same way for many years, it can be difficult for employees to accept or adjust to the new changes to their routines. The development of the protocol is the first step in overcoming these barriers to change and provide the staff a resource to use while implementing the new protocol.

The protocol was developed and copies of the protocol along with the survey were distributed to all of the expert reviewers. The expert reviewers were given ample time to complete the survey and give feedback to the protocol developer. It was encouraged that the expert reviewers complete the survey on their own personal time and to return the survey at their earliest convenience. The surveys were all returned within three weeks of initial distribution and the data was then analyzed. Survey data was imputed into an Excel document and the results are shown in Table 1. The protocol was then updated based on the data collected from the survey and the changes the expert reviewers recommended.

Using a survey allowed the protocol developer to gather important information from all members of the healthcare team involved in the potential protocol implementation. The survey was only five questions, which enabled the expert reviewers to complete the survey quickly and efficiently. The expert reviewers may have taken longer to respond or not have responded at all because it would have been too time consuming if the survey had more questions to answer. The survey was also easy to read and the questions were straightforward, eliminating any reason for potential confusion.

The results are shown in Table 1. An anesthesiologist, obstetrician, pediatrician, PNP, delivery nurse, lactation nurse, and labor nurse were all asked to complete the survey. These members of the team are extremely important in the development of the protocol and their opinions are vital to improving and potentially implementing the protocol in the future. In reviewing the data collected from the surveys, it was apparent that all the expert reviewers strongly agreed that the content of the protocol was appropriate and useful to the target audience. All but one of the expert reviewers strongly agreed that the amount of content of the protocol was appropriate and useful for the target audience and the presentation style was appropriate for

this topic. All of the expert reviewers strongly agreed that the content of the protocol was educational and useful to the target audience. Various ideas for improvement of the protocol included: utilizing checklists for all deliveries, not just cesarean sections, to prevent tasks from being forgotten; consider removing infant prior to transfer of mother from OR table to GYN bed; and ensure no moisture between mother and infant to prevent potential hypothermia. Other ideas of improvement were making the protocol “less friendly”, and removing “we” and “our” since it is a professional protocol; the protocol will greatly help our breastfeeding moms; and use a group to help identify change agents to assist in implementation.

In receiving feedback from the surveys, the amount of “positive” results was encouraging. It was unexpected to find such positivity and encouragement from the expert reviewers because as previously stated, adapting to a new change can be difficult. In developing the protocol, the writer expected some negative feedback and opinions but the expert reviewers showed no sign of negativity in their survey results. The survey results showed that the expert reviewers “agreed” and “strongly agreed” with all of the questions asked, indicating that the protocol content was well developed, appropriate, and educational for the target audience.

Discussion

Skin-to-skin in the operating room is a new and upcoming topic of discussion in the world of obstetrics. Skin-to-skin contact typically will occur after a vaginal delivery, but has failed to become a common practice after a cesarean delivery in the operating room. Many barriers prevent this from happening including anesthesia concerns related to accessing the mother, nursery concerns related to adequate assessment of the infant on the mother’s chest, and concern regarding maintaining the sterility of the field. Developing a skin-to-skin in the

operating room protocol is the first step in overcoming these barriers and will assist in easing anxiety among the staff upon the change in practice.

A quality improvement project was introduced in a large hospital in California to improve breastfeeding rates after a cesarean section by initiating a skin-to-skin protocol in the operating room and recovery room. The researchers found that within the first three months after implementing the project, the rate of skin to skin within ninety minutes from a healthy cesarean birth increased from 20% to 68% (Hung & Berg, 2011). After nine months, 60% of healthy newborns were placed skin-to-skin in the operating room and 70% were placed skin-to-skin within ninety minutes of birth (Hung & Berg, 2011). Nine months after the intervention, there was an increase in Latch, Audible swallowing, Type of nipple, Comfort, Hold (LATCH) scores among newborns who were placed skin-to-skin in the operating room compared to infants who did not receive skin-to-skin within ninety minutes after birth (Hung & Berg, 2011).

In comparison, the protocol developed for this project is similar to the protocol developed for the large hospital in California. However, each labor and delivery unit is different in how they provide care to their patients, so each protocol must be tailored specifically to the needs of each unit. In working towards future implications for practice, it is probable that the protocol will be implemented and further data will be gathered from the implementation phase. Ideally, skin-to-skin rates, breastfeeding rates, patient satisfaction rates, and staff satisfaction rates would increase after implementing the new protocol.

A possible limitation related to the protocol development was that a single person, not a team of people, developed the protocol. Typically, several members of the team within the unit will develop a protocol. If there are several members of the healthcare team developing the protocol, there is more opportunity for various opinions and input throughout the development

phase. However, if one person develops the protocol, there is more room for changes after the development phase and the evaluation phase. The protocol was developed using evidence-based practice and research, and was evaluated by various members of the healthcare team that will participate in the future protocol implementation, therefore the limitation of a single-person developer should be minimized.

The results from the expert reviewers' surveys show that the protocol is well developed for the target population: the healthcare team implementing the protocol. Based on the results from the expert reviewers' surveys, the protocol was educational and appropriate for the target audience. The protocol is detailed specifically in what tasks should be performed in a step-by-step guide making it easy for nurses to follow. Each step of the protocol outlines the task with an evidence-based rationale that the nurse should complete. The protocol developer expected more negative feedback. It is typical that co-workers dislike any change to policy or procedure, so the developer expected some negative feedback and comments.

There was no cost involved with the development and evaluation of the protocol. The protocol was developed on the writer's own personal time and surveys were encouraged to be completed on the expert reviewer's personal time. Further implications for study include the actual implementation of the protocol and evaluation of the implementation process. A skin-to-skin team consisting of members from nursing, advanced practice providers, and physicians would develop an educational module for the unit to begin implementing the protocol. Teaching and education would be provided to the staff prior to implementing the protocol. Staff would be able to voice their opinions and the team would be open for changes or suggestions from the other staff. Once the process is finalized, the skin-to-skin in the operating room protocol would be initiated. The protocol would be followed and if the future study were approved, surveys

would be distributed to gather data to evaluate patient and staff satisfaction rates, breastfeeding rates, and skin-to-skin rates.

Skin-to-skin in the operating room is becoming a topic of discussion in the maternal-child area of nursing. Mothers are not being given an equal opportunity to initiate skin-to-skin during a cesarean section as those mothers who deliver vaginally are. The protocol development and evaluation is the first step in overcoming barriers perceived by staff, will lead to future protocol implementation, and may lead to increases in patient satisfaction rates, breastfeeding rates, staff satisfaction rates, and skin-to-skin rates.

Table 1. Summary of Expert Review Data

Question	Anesthesiologist	Obstetrician	Pediatrician	PNP	Delivery Nurse	Lactation Nurse	Labor Nurse
The content of the protocol is appropriate and useful to the target audience	5	5	5	5	5	5	5
The amount of content of the protocol is appropriate and useful to the target audience	5	4	5	5	5	5	5
The presentation style (hard copy) of the content is appropriate for this topic	5	4	5	5	5	5	5
The content of the protocol is educational and useful to the target audience	5	5	5	5	5	5	5
List your ideas for improvement of the protocol	Ensure checklist is routine for all births, therefore it won't be confused and forgotten.	Time of discussion of skin-to-skin (prenatal classes?). Consider transfer of mother from OR table to GYN bed - remove infant before transfer.	Make protocol less "friendly"; remove "we" and "our" since it is a professional protocol.	None.	Greatly going to help our breast-feeding moms.	Ensure no moisture between mother and infant to protect infant from hypothermia	Target individual change agents as a group to begin implementation. Identify steps to proceed with implementation

Note: 5-point Likert Scale: 1: Strongly disagree, 2: Disagree, 3: Neither disagree or agree, 4: Agree, 5: Strongly Agree

References

- Feldman, R. (2004) Mother-infant skin-to-skin contact (kangaroo care). *Infants and Young Children, 17*(2), 145-161.
- Gouchon, S., Gregori, D., Picotto, A., Patrucco, G., Nangeroni, M., & DiGiulio, P. (2010) Skin-to-skin contact after cesarean delivery: An experimental study. *Nursing Research, 59*(2), 78-84.
- Hung, K.J., & Berg, O. (2011) Early skin-to-skin after cesarean to improve breastfeeding. (2011) *MCN-The American Journal of Maternal-Child Nursing, 36*(5), 318-324.
- Mangan, S., & Mosher, S. (2012) Challenges to skin-to-skin kangaroo care: Cesarean delivery and critically ill NICU patients. *Neonatal Network, 31*(4), 259-261.
- Menacker, F., & Hamilton, B.E. (2010) *Recent trends in cesarean delivery in the United States* (NCHS Data Brief No. 35). Hyattsville, MD: National Center for Health Statistics.
- New York State Department of Health (NYSDOH). (2014) *NYSDOH Breastfeeding quality improvement in hospitals (BQIH) change package*. Retrieved from: https://www.health.ny.gov/community/pregnancy/breastfeeding/docs/bqih_change_package.pdf
- Phillips, R. (2013) The sacred hour: Uninterrupted skin-to-skin contact immediately after birth. *Newborn & Infant Nursing Reviews, 13*, 67-72.

Appendix A

SKIN-TO-SKIN IN THE OPERATING ROOM PROTOCOL

SCOPE OF PRACTICE: RN's, Providers (Midlevel, PNP or Physician)

I. PURPOSE:

To assist the RN in providing skin-to-skin in the operating room safely to both the newborn and the mother.

To define and outline the roles and responsibilities of the RN caring for the newborn regarding skin-to-skin in the operating room.

II. SUPPORTING DATA

Skin-to-skin contact immediately after an infant is born has been shown to benefit the newborn's transition from inside the mother's womb to the outside environment and promote mother-baby attachment and bonding (Mangan & Mosher, 2012).

Skin-to-skin contact supports physiologic stability for the infant. The newborn's respiration rate, oxygenation levels, glucose levels, and temperature stabilize while skin-to-skin with the mother (Phillips, 2013).

Skin-to-skin contact immediately after birth provides the infant an opportunity to advance through the nine instinctive stages, which promote a positive breastfeeding experience (Phillips, 2013), and leads to increased breastfeeding rates.

There was no difference in the temperature of infants when skin-to-skin care (naked, diapered with infant prone on mother's bare chest and covered with warm blankets) was practiced following cesarean birth or whether the infants were provided routine care (dressed and in a crib) (Gouchon et al., 2010).

III. DEFINITIONS

Skin-to-skin contact is the process of positioning a naked infant on a mother's bare chest immediately or within the first hour of birth.

IV. POLICY

A. The safety and well-being of the mother and infant are always **FIRST** priority. If at any point the obstetrician, anesthesiologist, PNP, labor nurse or delivery nurse feel that there are **concerns regarding the mother or infant safety**, they always have the ability to remove the infant from skin-to-skin contact.

The delivery nurse will be readily available at the bedside to do so as quickly as possible.

- B. Ensure a proper operating room temperature for all team members, keeping in mind infant will be skin-to-skin. Warm blankets must be available immediately for both mother and infant while skin-to-skin.
- C. Prior to birth
 - a. Skin-to-skin is discussed with the mother in the pre-op appointment and/or prior to scheduled or unscheduled cesarean section.
 - b. If scheduled cesarean section:
 - i. Skin-to-skin is discussed in the pre-op appointment and then again in the morning prior to going to the operating room. It is then the circulating nurse's responsibility to inform the entire team that skin-to-skin in the operating room will take place as long as the mother and infant are stable.
 - c. If un-scheduled cesarean section:
 - i. Emergency cesarean section: no skin-to-skin in the operating room if the mother/infant are unstable. Initiate skin-to-skin contact as soon as the mother and infant are stable.
 - ii. Non-Emergent cesarean section: discuss skin-to-skin in operating room with mother prior to proceeding to operating room and inform the team that skin-to-skin will occur in the operating room as long as the mother and infant are stable.
 - d. Delivery nurse responsibilities:
 - i. Preheat radiant warmer prior to birth. Ensure multiple blankets are in the warmer in the operating room.
 - ii. Set-up for delivery and ensure all equipment is working properly.
 - iii. Discuss with anesthesia regarding moving IV poles and ensure that the sterile drape is set up appropriately for the case, but lower than the breasts, so that they are not in the way when placing infant skin-to-skin.
 - iv. Be aware of mother's IV access and vital sign monitors when skin-to-skin.
 - e. Circulating nurse responsibilities
 - i. Ensure that the mother is not wearing a bra and that the mother's gown is unsnapped to allow it to be lowered to uncover her chest when placing baby on chest.

BIRTH OF TERM INFANTS:

STEPS	RATIONALE
<p>a. Once infant is born, PNP will show infant to the mother quickly and then bring infant to radiant warmer. Delivery nurse and PNP will provide initial stimulation and any necessary resuscitation under the radiant warmer.</p> <p>b. Infant will be assigned a 1-minute APGAR, cord clamped/trimmed, and a quick initial head-to-toe assessment will be completed by delivery nurse/PNP to ensure a healthy and stable infant. (This should not exceed the 5 minute APGAR)</p> <p>c. Anything NOT necessary for the immediate well-being of the newborn can be delayed until after the first breastfeed (weight, length, footprints, vaccines). See below for more information.</p> <p>d. Stability of mother will be confirmed by anesthesia and by the patient herself.</p>	<p>a. Follow neonatal resuscitation program (NRP) guidelines for initial stimulation and necessary resuscitation for infant (Kattwinkel & Bloom, 2011).</p> <p>b. Follow neonatal resuscitation program (NRP) guidelines and assess infant head to toe to observe any birth defects or malformations that may interfere with initial extrauterine transition (ex: choanal atresia, heart defect, diaphragmatic hernia, etc.).</p> <p>c. Per New York State Department of Health (NYSDOH) Breastfeeding Quality Improvement in Hospitals (BQIH), routine procedures should be delayed until after the first breastfeed (NYSDOH, 2014).</p> <p>d. A common barrier to skin-to-skin in the operating room is anesthesia concerns regarding mother’s stability (Mangan & Mosher, 2012). This can be overcome by ensuring the mother is stable by confirming her status with anesthesia and the mother herself. Also, if any concerns regarding the stability of the mother arise throughout skin-to-skin contact, anesthesia has immediate “veto power” to have the infant removed from the mother’s chest (Phillips, 2013).</p>

<p>e. At this time, if infant and mother deemed stable, infant may go skin-to-skin with mother.</p> <p>f. The delivery nurse will place a diaper and hat on the infant and then place the baby on the mother's chest in a transverse position with the baby's head on one breast and the abdomen on the other breast, and then cover the baby with a large warm blanket.</p> <p>g. The mother can support the infant with the arm not attached to the blood pressure cuff, so it will not interfere with her monitoring. It's important to also be aware of the mother's IV placement so that holding the infant does not interfere with her receiving IV fluids. Her partner and/or baby delivery nurse can also support the infant on her chest.</p> <p>h. The delivery nurse will remain at the bedside throughout the case, observing infant to make sure that baby's head is positioned so that nares are always visible, the baby's color, perfusion, temperature, and respirations remain stable, and the baby doesn't slide off the mothers chest towards her neck. If this does occur, the baby can be gently repositioned without lifting the baby off the mother's skin. If the baby begins to search for the breast or advances to the crawling stage while in the OR, the significant other can hold the baby's leg to make sure the</p>	<p>e. Skin-to-skin assists in newborn transition to extrauterine life, improves breastfeeding rates, and promotes mother-infant bonding (Mangan & Mosher, 2012).</p> <p>f. This positioning allows for mother to be able to hold infant safely and for the delivery nurse to visualize the infant's stability (Mangan & Mosher, 2012) (Phillips, 2013).</p> <p>g. Blood pressure and IV fluids are an important part of the operation, so it is essential that the delivery nurse is cautious when placing infant skin-to-skin and is mindful of her IV access and blood pressure cuff (Phillips, 2013).</p> <p>h. Delivery nurse should always be at the bedside to be available to assist the mother in positioning, ensure the infant is stable, and to remove the infant if medically necessary (Mangan & Mosher, 2012) (Phillips, 2013).</p>
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<p>baby stays on the mother’s chest.</p> <p>i. If the infant begins to suckle and root while in the OR during the case, the infant can be left to do so. The infant will go through the stages and latch without much assistance.</p> <p>j. The delivery nurse will perform the necessary vital signs and other interventions (necessary blood glucose levels) while infant is skin-to-skin with mother.</p> <p>k. Once the surgery is complete and the mother is ready to be transferred from the OR table to the GYN bed, the infant can be moved to a vertical position in between the mothers breasts. She can cross her arms over the baby and the delivery nurse can place her hands on top of the baby while the mother is being turned from side to side and transferred to the GYN bed. The mother and infant can then be transported to their designated postpartum room.</p> <p>Infant medications:</p> <ol style="list-style-type: none"> 1. Erythromycin ointment must be administered after birth and can be administered after the first breastfeed while skin-to-skin. 2. Vitamin K can be administered anytime within 6 hours of birth; so can be administered while skin-to- 	<p>i. Uninterrupted skin-to-skin should occur for at least one hour after birth, until the completion of the first feeding (NYSDOH, 2014). The infant may advance to the crawling stage in the OR and could search for the breast. If this happens, the significant other can help hold the infant’s leg or thigh to ensure that the infant remains on the mother’s chest (Phillips, 2013).</p> <p>j. Heel punctures are found to be less painful for the infant while they are skin-to-skin and nursing (Mangan & Mosher, 2012).</p> <p>k. The infant does not have to be removed from skin-to-skin contact during the transfer and can continue to go through the nine instinctive stages towards the first breastfeed (Phillips, 2013).</p> <ol style="list-style-type: none"> 1. Eye prophylaxis is required by NYS and can be administered while skin-to-skin (NYSDOH, 2014). There is no written timeframe within the NYS law (NYSDOH, 2000). 2. Vitamin K can be given after the first breastfeed, but must be given within 6 hours of birth per
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<p>skin with mother AND after the first breastfeed.</p> <p>3. Hepatitis B vaccine can be administered anytime within 12 hours of birth; so it can be administered while skin-to-skin with the mother AND after the first breastfeed.</p> <p>l. Infant weight, length, footprints, and Ballard scale can all be delayed until after skin-to-skin care and the first breastfeed.</p> <p>m. Delivery nurse will complete initial 1-2 hours of vital signs as per policy (1-2 hours depending on census of unit) and attach the infant identification bands/security band while skin-to-skin with mother.</p> <p>n. Delivery nurse will place infant security band number in the computer and put in cord blood labs if applicable.</p> <p>o. The delivery nurse will give report to the circulating nurse following the 1-2 hours of vital signs completed.</p> <p>p. Ideally, the delivery nurse would have NO assignment, except deliveries, which would give her time to follow the newborn after delivery and complete the remaining tasks (footprints, vaccines, length, weight, etc) after the initial breastfeed.</p>	<p>NYS requirements (NYSDOH, 2014).</p> <p>3. Hepatitis B vaccine should be given skin-to-skin to minimize pain for the infant and after the first breastfeed (Mangan & Mosher, 2012).</p> <p>l. Per NYSDOH BQIH, these procedures should be delayed until after the infant has breastfed (NYSDOH, 2014).</p> <p>m. The delivery nurse will complete 1-2 hours of vital signs depending on the census of the unit and attach the infant security bands.</p> <p>n. The delivery nurse will place the infant security band number in the computer and put in cord blood labs if applicable.</p> <p>o. The delivery nurse will give report to the circulating nurse following the 1-2 hours of vital signs completed.</p> <p>p. A delivery nurse with no other assignment would be ideal as it would give more time for skin-to-skin without the pressure of needing to complete all of the “delivery nurse tasks” as quickly as possible. The circulating nurse can help with any remaining tasks not completed by the delivery nurse.</p>
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<p>q. The scale can be brought into the postpartum (pp) room, and the rest of the assessment and delivery nurse tasks can be completed there.</p> <p>r. The circulating/pp nurse can also complete the remaining vaccines, length, weight, footprints, Ballard scale, and head to toe assessment after the first breastfeed.</p> <p>s. A checklist will be provided with the delivery nurse paperwork to ensure that nothing is missed or overlooked in reporting off the baby from delivery nurse to circulating/pp nurse.</p> <p>t. Once the above tasks are completed, either the delivery nurse or circulating/pp nurse can complete the delivery summary and logbooks.</p>	<p>q. The weight, length, and other delivery nurse tasks can be delayed until after the first breastfeed and be completed in the pp room.</p> <p>r. Per NYSDOH BQIH, these procedures should be delayed until after the infant has breastfed (NYSDOH, 2014).</p> <p>s. It is imperative that the delivery nurse report off any remaining vaccines/medications that must be given within a certain time frame.</p> <p>t. Complete these tasks as per current policy.</p>
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BIRTH OF LATE-PRETERM INFANTS

STEPS	RATIONALE
<p>a. Infants 34 0/7-34 3/7 – needs seventy-two hours of continuous cardiopulmonary monitoring. If infant stable, may show infant to mother and let her touch the infant in operating room prior to transferring infant to SCN and follow current policy and procedures.</p>	<p>a. Per current policy, infants 34 0/7-34 3/7 weeks must have seventy-two hours of continuous cardiopulmonary monitoring.</p>
<p>b. Infants 34 4/7-34 6/7 – needs six hours of continuous cardiopulmonary monitoring. If infant stable, may show infant to mother and let her touch the infant in operating room prior to transferring infant to SCN and follow current policy and procedures.</p>	<p>b. Per current policy, infants 34 0/7-34 3/7 weeks must have six hours of continuous cardiopulmonary monitoring.</p>
<p>c. Infants 35-36 6/7</p> <p>a. If infant is vigorous and determined stable at delivery by PNP and delivery nurse, infant may go skin-to-skin with mother and the same procedures as above will be followed.</p> <p>b. Blood glucose may be obtained while infant is skin-to-skin with mother and if BG is low, proceed to the next step based on our current hypoglycemic policy and PNP orders.</p> <p>c. If infant can breastfeed, it can be done while infant is skin-to-</p>	<p>a. Follow neonatal resuscitation program (NRP) guidelines for initial stimulation and necessary resuscitation for infant (Kattwinkel & Bloom, 2011). Skin-to-skin assists in newborn transition to extrauterine life, improves breastfeeding rates, and promotes mother-infant bonding (Mangan & Mosher, 2012).</p> <p>b. Heel punctures are found to be less painful for the infant while they are skin-to-skin and nursing (Mangan & Mosher, 2012).</p> <p>c. The infant may advance to the crawling stage in the OR and could</p>

<p>skin with mother on OR table.</p> <p>d. Temperature regulation is especially important in these infants, so multiple warm blankets should be provided and vital signs should be taken as per protocol. As long as infant remains stable, the same procedures following delivery of a term infant will take place as stated above.</p> <p>e. If infant requires further evaluation, the PNP and delivery nurse will proceed with the current practices, take the infant to SCN, and can provide skin-to-skin when infant is stable.</p>	<p>search for the breast. If this happens, the significant other can help hold the infant's leg or thigh to ensure that the infant remains on the mother's chest (Phillips, 2013).</p> <p>d. Skin-to-skin provides optimal temperature control for newborns (Phillips, 2013).</p> <p>e. Follow current practices if newborn requires further evaluation.</p>
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References

- Gouchon, S., Gregori, D., Picotto, A., Patrucco, G., Nangeroni, M., & DiGiulio, P. (2010). Skin-to-skin contact after cesarean delivery: An experimental study. *Nursing Research, 59*(2), 78-84.
- Kattwinkel, J. & Bloom, R.S. (2011). *Neonatal resuscitation (NRP)*. Dallas, TX. American Academy of Pediatrics.
- Mangan, S., & Mosher, S. (2012) Challenges to skin-to-skin kangaroo care: Cesarean delivery and critically ill NICU patients. *Neonatal Network, 31*(4), 259-261.
- New York State Department of Health. (2000). Section 12.2 - Precautions to be observed for the prevention of purulent conjunctivitis of the newborn. Retrieved from:
<http://w3.health.state.ny.us/dbspace/NYCRR10.nsf/56cf2e25d626f9f785256538006c3ed7/8525652c00680c3e852565300065d734?OpenDocument>
- New York State Department of Health. (2014) *NYSDOH Breastfeeding quality improvement in hospitals (BQIH) change package*. Retrieved from:
https://www.health.ny.gov/community/pregnancy/breastfeeding/docs/bqih_change_package.pdf
- New York State Department of Health. (2014). Section 12.3 – Precautions to be observed for the prevention of hemorrhagic diseases and coagulation disorders of the newborn and infants related to vitamin K deficiency. Retrieved from:
<http://w3.health.state.ny.us/dbspace/NYCRR10.nsf/56cf2e25d626f9f785256538006c3ed7/8525652c00680c3e8525652c004f460d?OpenDocument>
- Phillips, R. (2013) The sacred hour: Uninterrupted skin-to-skin contact immediately after

birth. *Newborn & Infant Nursing Reviews*, 13, 67-72.