Skin-to-skin Care: Does it make a difference?

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Skin to Skin: Does it make a difference?

As a nurse who has dedicated her career to maternal child health, many practices have changed over the last 28 years. Skin-to-skin care (STS) has been a topic of interest for several years but was not discussed to the degree it is in the last couple of years. STS care is when, immediately after delivery, the undressed baby is placed on the mother’s abdomen and left there to facilitate transition of the infant after birth. Galligan (2006) stated that STS or Kangaroo Mother Care (KMC) evolved from a need in Columbia to decrease morbidity and mortality with preterm infants from over crowding and lack of resources in hospitals. Babies were placed with their mothers to help care for them and an immediate benefit was seen with increased breastfeeding success and infant weight gain.

I am interested in this topic as I have witnessed many benefits of STS care between infants and their parents. Many nurses that I work with continue to feel that STS care is a farce and serves no benefit to the infants. They have practiced a certain way for years and want to continue to do so. In addition, many of the younger nurses want to just get their work done and do not promote the benefits of STS to the parents. A couple of years ago the benefits of STS were presented to our staff. Nurses were encouraged to promote this practice for the patients we serve. Two years later, there are still nurses who come into delivery rooms and say to the parents "do you want me to get your baby cleaned up". The parents will usually say yes go ahead when asked in this way. If presented with the benefits of STS care and describing the importance of not interrupting this bonding until after nursing, most parents will forgo the bath until after breastfeeding has been initiated.

My goal was to get a good amount of research data together to then present to my co-workers so that a change in practice can occur. While many nurses do practice STS, there are
still many that need continued reminders to do so. Also, many hospitals continue to practice care that separates mothers and infants by taking the baby away immediately after delivery to do the bath, medications, weight and assessment. Articles like, “Skin-to-Skin Contact: Giving Birth Back to Mothers” (2007) which found STS care should be initiated immediately after birth whenever possible and “Kangaroo Care at Birth for Full Term Infants: A Pilot Study” (2007) which showed that infants were more successful with nursing if STS was not interrupted until after breastfeeding has been initiated, give good evidenced based research regarding the benefits of STS care.

I spent time in the hospital medical library looking for articles and also did a literature search on CINAHL and Pub Med on my intranet at work. I also utilized Ferris’ online library resource to complete the search. Key words utilized were kangaroo care, skin-to-skin care and thermoregulation. Each key word search gave several articles about STS care. Many articles addressed the benefits of STS contact with parents immediately after birth and beyond. Articles also used the terms Kangaroo Care (KC) or Kangaroo Mother Care (KMC) as synonyms for STS care. All the articles contained universal results supporting use of STS care to regulate infant’s temperature by holding them closely against mother’s skin.

After doing the literature search, confirmation regarding the benefits of STS care was obtained. I have chosen 13 articles to utilize for the purposes of this essay. While there are many relevant articles found in the literature search, it was important to choose the most pertinent articles that best described the benefits and barriers to STS care without becoming too wordy in the presentation of the information. Some of the references fall into the dated category but due to the quality of the study done, were used for the purposes of this topic. I have broken down the essay to include sections which reflect the benefits, the barriers, the technique and how
skin-to-skin care can become the universal care given to all new infants immediately after birth.

**Benefits of Skin-to-Skin**

STS has many benefits. These benefits are both short term and long term in nature. Galligan (2006) discussed that many studies have shown that STS is beneficial not only for thermoregulation instead of an infant warmer but for promotion of breastfeeding and bonding in the first few hours of life. Temperature modulation is one that plays an important role in the stabilization of the infant immediately post delivery. A study by Chiu, Anderson and Burkhammer showed that full term infants maintained a temperature range between 36.5 and 37.6 degrees Celsius (2005). The study was looking at infants that have breastfeeding difficulties and how the use of STS is beneficial in creating temperatures that are higher than infants who were in a crib next to the mother. The study also showed that ethnic, demographic or clinical variables showed minimal differences in the ability to maintain a constant temperature.

Successful breastfeeding is another important result of STS care immediately after delivery. The article by Bramson et al. (2010), discusses the fact that newborns are more likely to have a successful latch in the first hour after birth. If this time is uninterrupted by healthcare workers, most infants will achieve a latch soon after birth. This phenomenon is related to a surge of catecholamine which creates an alert state immediately after birth. This article also brings forth the importance of STS helping to alleviate delivery stress in infants “by decreasing the infant’s sympathetic tone through mother’s touch, body warmth and odor” (p. 131). In addition, STS contact done in the first three hours after birth has been linked to increased exclusive breastfeeding, up to three months longer than infants who have not experienced STS contact immediately after birth. Meyer and Anderson’s article (1999) discusses how STS care stimulates the release of Oxytocin which in turn causes the let-down of milk for successful breastfeeding.
The article “Kangaroo Mother Care and the Bonding Hypothesis” (1998) also spoke to the importance of the confidence that mothers gained from the STS experience while in the hospital. STS care also decreased the stress levels and worry subscales in the study done by Tessier et al. conclude that the “close mother-infant contact during the first two days after birth is optimal to produce a major change in a mother’s sense of competence toward her infant” (1998, p. 7)

Globally KMC is being taught in low-income countries in hopes of improving newborn morbidity and mortality. An article titled “Positive Effects of Kangaroo Mother Care on Long-term Breastfeeding in Very Preterm Infants” (2011), detailed a prospective study in Sweden looked at infants who had spent time in the NICU and participated in KMC. Infants, who were nursing three to four months down the road, had spent a considerable amount of time with KMC. Flacking, Ewald and Wallin stressed that this is especially important for micro-premies whose gastrointestinal tract is immature and the preterm milk helps line the gut with needed antibodies.

Ahmed et al. (2011) discussed a study done in Bangladesh regarding neonatal survival in very low income settings. The study was a randomized control study that found infants had no better outcomes when held STS less than 7 hours a day. The authors concluded that the manner in which an infant is held definitely makes a difference in the benefits to the health of an infant. The article stressed the importance of educating the women about the benefits to their infants and demonstrations in technique are very important in low-income countries.

In another article by Matthiesen, Ransjo-Arvidson, Nissen, & Uvnas-Moberg (2001), skin-to-skin contact immediately after birth showed an inherent orderly sequence of healthy behaviors similar to that of mammals. Mothers used as the primary heat source are more likely to help the baby regulate their temperatures than a warmer was confirmed by Dabrowski. (2007, p.
The article by Matthiesen et al. (2004) also showed that the duration of breastfeeding was significantly lengthened with infants that had participated in skin-to-skin care right after birth. In addition, there was an increased ability for the infant to recognize their mother and increased rooting compared to infants that had not participated in skin-to-skin post delivery care. In addition, KMC is utilized in the Neonatal Intensive Care Units (NICU) to help preterm infants stabilize their temperature and breastfeed more efficiently.

The article by Drabrowski (2007) also discusses the analgesic benefits of STS care during routine heel sticks and injections. Pain in infants causes crying, grimacing and dramatic heart rate increases and STS care has been noted to decrease all of these responses. In addition the article by Walters et al. (2007) discussed how physicians had noted that pain was significantly decreased for mothers who needed perineal stitches after birth. The comfort to mothers is thought to be related to “decreased hypothalamic-pituitary-adrenal axis reactivity to painful and/or stressful events” (2007, p. 380).

Another article by Gray, Watt and Blass (2000) involved a prospective random controlled trial to evaluate pain in infants with heel sticks and STS care. Pain, as evaluated by infant crying and facial grimacing was markedly reduced by 65-82%. The one important finding was that taste-induced analgesia was almost immediate while contact induced analgesia required 10-15 minutes of STS contact. This is important finding that nurses need to realize to give the parent and infant adequate time prior to giving the injection or heel stick.

**Barriers of Skin-to-Skin**

When patients have labored and delivered an infant, fatigue is inevitable. Often mothers will say, “I just need a few minutes to recover, go ahead and bathe the baby”. Galligan’s article contained this quote that summed up some of the many variables that could create a barrier to
STS. “Pain, fatigue, nausea, vomiting, and altered mental status due to anesthesia or narcotics are just a few reasons why the mother may not be willing or appropriate to initiate the intervention”(2006, p. 302). While it is important to support the mother after delivery, educating her on the benefits will usually result in STS care initiation.

Engler et al. (2002) present other barriers to skin-to-skin which include medication administration and blood sampling for glucose levels on small or large infants, nurses concerns with delays in routine admission tasks and thermoregulation issues, lack of physician support and lack of clear guidelines. The article also stresses lack of education on the benefits of STS care as a major barrier to routine practice in many labor and delivery units and neonatal intensive care units. Giving nurses the evidence for positive benefits will assist them in supporting STS care. The increased work load concern from nursing staff was also addressed stating that the work load was actually less as infants had a more stable temperature and involved parents felt more comfortable with their infant’s care so required less of the nurse’s time at the bedside. Also, the article by Walters et al., described how nurses definitely saw the benefits of their descriptive study and actually became more interested in nursing research and volunteering to be involved in future studies as a result of their participation in this study.

**Skin-to-Skin Technique**

The article by Chiu et al. (2005) discusses how STS care is done. When STS contact is immediately after birth, the baby should be dried well and placed directly on the mother’s chest. The infant should be upright with head between mother’s breasts and turned to one side. If a diaper is used it must be small enough so that the whole abdomen can come in contact with the maternal body. The mother should have clothing on that opens completely to accommodate STS, even if wearing a patient gown backwards is needed to accomplish this. Chui, Anderson
and Burkhammer also stress the importance of a hat being placed on the infant’s head and to be changed if becomes damp.

**Implementing a Skin-to-Skin Practice**

Galligan (2006) also showed that with 58% of infants experiencing hypothermia in the first 72 hours of life, it is important for healthcare providers to provide education and assistance to new parents in providing optimal care for their new infant. Dabrowski’s (2007) article makes suggestions for administration of routine care practices taking place after the initiation of breastfeeding and stresses this to be an important aspect of transitioning to extra uterine life. The nurse can do infant vital signs, medications and any other non-resuscitative care on the mother’s chest. In addition Dabrowski also states with the largest barrier being nurse buy in to a practice change, educating the staff must occur to show that there is good evidence to support STS care and not just a nice thing to do for the parents. Having the appropriate staff is also an important aspect according to Dabrowski so that there is support of another nurse for the labor nurse to help care of the infant and breastfeeding for at least the first hour after delivery.

Walters et al. (2007) listed a Birth Kangaroo Care procedure for hospitals to implement that would increase the use of STS by nurses. This study showed the nurses that STS can be done without increases their work load. Witnessing the benefits of STS care allowed nurses to accept a change in routine at their institution. The procedure implemented in their institution was:

- Explain to laboring women about the concept of STS and its benefits for mothers and newborns
- Immediately place the infant on a warm blanket on mother’s abdomen and allow to rest until the cord is clamped
- Dry the infant and suction as needed while on the mother’s abdomen
- Remove the wet blanket which initiates STS
- Put on a head cap and diaper. Cover the infant’s back with a clean warm blanket folded in half after applying identification bands
- Delay infant’s eye treatment and injections until after the first feeding at breast while infant is still in STS care
- Monitor infant’s temperature every 15 to 30 minutes to be certain that temperature remains within clinically acceptable range
- Allow infant to spontaneously move toward the breast and latch onto a nipple. Infant may lunge at nipple two to three times before latching. This may take up to 75 minutes but occurs in most infants
- Provide first breastfeeding support to mother
- Anticipate STS will not increase nursing workload and that episiotomy or laceration repair discomfort may be minimized (2007, p. 380).

**Conclusion**

Of all the possible physiologic changes a new infant must experience after birth, regulation of temperature is the most important in creating a stable transition to life outside of mom. STS contact is also an essential component of the initial bonding experience between a mother and her infant as well as fathers. This time shortly after birth is crucial for parents to begin bonding with their infant and have it be reciprocated. Events that interfere with maternal-infant bonding must be limited to give baby the best start at successful breastfeeding. In theory creating an environment that babies are allowed to transition as naturally as possible is ideal. All the literature I found supported using STS care in routine practice. Nothing suggested that this
practice was not valuable for the infants of any gestational age, including micro-premies.

Nursing has the chance to replace routine practices with more family friendly activities and STS care is a great place to start. Through evidenced based research practice, nurses have the ability to incorporate STS care in the hospital and bring back a delivery experience that is between parents and their infants.
References


