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# BARRIERS TO *Skin-to-Skin* CONTACT AFTER CESAREAN BIRTH

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## Abstract

**Objectives:** The aim of this research was to understand obstetric nurses' perceived barriers to immediate skin-to-skin contact (SSC) in the operating room (OR) after cesarean birth.

**Methods:** Semistructured, open-ended interviews were conducted via videoconferencing. Conventional content analysis methods were used to analyze the data for common themes. Investigation team consensus was reached to validate the analysis findings.

**Results:** Ten nurses who care for women during labor and birth were interviewed. The primary overarching theme was *performing safe and effective SSC after cesarean birth*. Nurses strongly believe in the benefits of SSC after cesarean and try to implement it as often as possible, but various factors prevented SSC in the OR from occurring on a regular basis. Providing immediate SSC is not considered a priority during the cesarean by all members of the team. All participants reported that there were no formal policies and procedures in their facilities for SSC in the OR. Challenges with safety, nurse staffing, and logistics were described as well as professional barriers, and varying practices between geographical location and facilities. Nurses discussed concepts that were facilitators for changing their current practices to support SSC after cesarean.

**Clinical Implications:** Implications: Developing effective policies and procedures that support SSC in the OR after cesarean and changing practice accordingly is recommended. Adequate nurse staffing in the OR is essential.

**Keywords:** Cesarean section; Infant; Newborn; Postnatal care; Professional practice gaps.

Immediate skin-to-skin contact (SSC) after vaginal birth is the recommended standard of care (American Academy of Pediatrics [AAP] & American College of Obstetricians and Gynecologists [ACOG], 2017). Research has long supported benefits of immediate SSC between mothers and newborn after birth (International Childbirth Education Association [ICEA], 2015). Skin-to-skin contact is defined as the placement of the naked newborn directly onto the mother's bare chest, with no barriers between the mother's skin and the baby's skin (ICEA). Benefits of SSC include improved thermoregulation, vital sign stabilization and regulation, normalization of neonate's blood glucose, and the initiation and maintenance of a breastfeeding relationship (AAP, 2012; ICEA; World Health Organization, 2013).

The first hour of life is a sensitive period and is often referred to in the literature as the "golden hour," "sacred hour," or "magic hour" (Crenshaw, 2014). Regardless of maternal birth experience (or type of birth), immediate and uninterrupted SSC in the golden hour is an evidence-based practice recommendation (Baby Friendly USA [BFUSA], 2012). There is debate in the literature concerning what is considered immediate SSC, but the general consensus defines immediate SSC as being performed within 5 minutes of birth (Crenshaw). The golden hour is a limited time period wherein the mother and newborn form attachments to each other; therefore, it is recommended that SSC be initiated immediately and that all routine assessments and procedures be performed after the golden hour to allow for this critical bonding time between mother and baby (Crenshaw).

In some hospitals in the United States, mothers and newborns are separated for a period of 1 to 4 hours after a cesarean birth (Francis, 2016). During the period immediately after cesarean birth, it is standard practice to perform routine care for the newborn, such as completing physical assessments, obtaining measurements, and administering medications, which contributes to further delay of immediate SSC (Crenshaw, 2014; Francis). For these procedures, the baby is usually placed in the radiant warmer located in the room or sometimes taken into a separate room. In recent years, the terms "natural cesarean," "gentle cesarean," "woman-centered cesarean," and "family-centered cesarean" have been used interchangeably to describe cesarean techniques and changes in the operating room (OR) environment to improve the surgical birth experience, which can often feel impersonal and detached for patients (Magee, Battle, Morton, & Nothnagle, 2014; Schmidt, 2015; Scutti, 2017). For the purposes of this article, we will use natural cesarean. A central concept in the natural cesarean is allowing for SSC between mother and newborn to facilitate bonding immediately after birth (Magee et al.). Interventions in the natural cesarean approach are adjusted to allow for immediate SSC. For example, vital signs may be assessed while baby is on mother's chest, and a more complete physical assessment can be delayed until after the first hour has passed. After cesarean birth, it is feasible for SSC to be initiated in the OR (Hung & Berg, 2011). The usual method of anesthesia for cesareans is regional anes-

thesia, allowing for the woman to be awake and responsive during and after the surgery (Crenshaw).

The aim of this research was to identify barriers to the practice of SSC after cesarean in the OR as perceived by obstetric nurses. During a cesarean birth, nurses are crucial in ensuring the wellbeing of the mother and baby. The research questions for this project were: 1) what are obstetric nurses' attitudes toward the provision of immediate SSC and 2) what are the perceived barriers to immediate SSC after cesarean as reported by obstetric nurses?

## Methods

This project was an exploratory qualitative study using semistructured interviews that were conducted via videoconferencing. Inclusion criteria were nurses with at least 5 years of experience and were currently practicing in the obstetric unit. Prior to the initiation of interviews, the researchers estimated that data saturation would be achieved with eight or more participants. Purposive sampling (through personal and professional contacts) was used to obtain a sample of 8 to 12 nurses who care for women during labor and birth. Data saturation was reached after 10 participants were interviewed.

After the consent forms were signed and returned to the primary researcher, interviews were scheduled. At the start of the interview, the primary researcher reviewed with the participants the informed consent process and confidentiality, and then proceeded with open-ended, semistructured interviews. Six open-ended questions were used. The majority ( $N = 9$ ) of the interviews were 20 to 30 minutes with 1 interview of 10 minutes in length. Interviews were recorded using an online videoconferencing program, which were then sent to a transcriber service for transcription. Participants completed a demographic questionnaire about personal data (age, gender, and ethnicity) and nursing experience (employment status, educational background, and years of experience).

## Data Analysis

Conventional content analysis techniques were used to analyze the data (Hsieh & Shannon, 2005). After reviewing all of the transcriptions once, the research team then read each transcript thoroughly, highlighted words or phrases that described the participant's response, and wrote in the margins words or phrases that captured the participant's emotion. The research team met to compare preliminary results and through group dialog to establish meaning units through group consensus. Meaning units were coded into themes. The themes that were identified were used to describe the participants' perceptions and experience.

## Results

### Participant Demographics

Ten nurses who care for women during labor and birth participated. All were women. The majority ( $n = 9$ ) were white. Age range was 20–55 years. Education level and years of nursing experience varied. All participants had a baccalaureate degree in nursing, one participant had a master's degree in nursing, and another participant had a doctorate degree in nursing. Because subjects were sourced



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from personal and professional contacts, the sample involved nurses from different facilities and regions; however, we were unable to determine the exact number of hospitals represented, as the nurses reported their overall experiences with SSC. This included those working at more than one facility at the time of the interview, traveling nurses with multiple hospital sites, and nurses working at one facility for many years.

### Themes

Conventional content analysis yielded the primary overarching theme of *performing safe and effective skin-to-skin contact after cesarean birth*. Six thematic categories were identified within the primary theme: *safety, staffing, professional obstacles, drivers for change, logistical challenges, and regional and facility variances*.

Although most of the participants were familiar with SSC following cesarean, only four participants worked in institutions that performed SSC immediately after the birth as a routine practice. There was a range of practices constituting what was meant by SSC, with a third or more of the participants stating that for an initial 5 to 10 minutes after the birth the baby was assessed by NICU staff in the room and then given to the mother for SSC. For example, one participant said: *There is a sort of that in between where the NICU team wants to be sure that the baby is fine, the baby is stable. So, it takes just a little bit longer to get baby to mom*. Although in some cases skin to skin was practiced, it was not the routine: *It hardly ever happens and It's not been normalized yet*.

*Despite evidence supporting immediate skin-to-skin contact (SSC) after birth, women who give birth via cesarean do not have the same opportunities for SSC as those who have vaginal births.*

### Safety

Nurses identified several factors related to safety that affected their ability to facilitate SSC. Some factors identified included the importance of maintaining the sterile field and complying with infection control measures in the OR, as well as concern about the OR temperature being too cold for SSC. There was awareness among all the nurses that mothers having cesarean birth and their babies are generally high-risk or are at higher risk for complications.

A nurse's proximity to the baby, as well as a clear line of sight for observation, were the main safety concerns: (as the circulating nurse) *it's just not possible for you to keep eyes on your baby when it's skin-to-skin behind the sterile drape with the mom . . . you need to have a nurse there by the mom to have eyes on that baby*. Nurses were also concerned about keeping a stable temperature on the infant. *And then, of course, you know, you have blanket over the baby because you don't want the baby to get cold because ORs are generally cold*. Not only was it necessary to have a person "in charge" of observing the baby, but that person needed to be physically close with a view not obscured by a sterile drape or a blanket over the baby to keep it warm. This nurse would maintain a line of sight to the baby at all times while SSC is happening. Three participants noted that



in their facilities, SSC was performed in the OR after almost all cesareans, and the reason this was possible was because they were fully staffed with another nurse assigned in the OR whose sole responsibility was to facilitate SSC for mother and baby.

### Staffing

Staffing during a cesarean is crucial to facilitating SSC, according to participants. Many mentioned inadequate staffing as a major deterrent to SSC in the OR as noted by these quotes from participants: *If I was the only nurse in the room, that would definitely be a barrier... but in our hospital, we have a nurse for the baby and a nurse for the mom. And: Depending on staffing, sometimes the NICU nurse will stick around for a while and support skin-to-skin, but it's kind of a moving target as far as who has the resources available on each day and each shift. They always try to send in someone to assist the circulator, and I would say they do that 95% of the time. It might not be the entire time, but during the beginning of the case at least through to the last count, usually there's another nurse there...*

Despite nurse staffing guidelines per Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN, 2010), AAP & ACOG (2017), and Association of periOperative Registered Nurses (AORN, 2014) requiring one nurse for the mother and one nurse for the baby at every birth, this was not always the practice. In most cases, the baby left the OR with the nurse who had been responsible for the baby during the surgery, and SSC was reinitiated in the recovery room when the mother arrived.

Concepts such as cost-effectiveness versus having enough staff to support SSC in the OR were identified by the participants as barriers. One participant stated *The charge nurse is looking at staffing as quick turnover. I want to get that second nurse in and out as quickly as possible. Unfortunately, the way things work at our facility is that a gentle C-section would require that second nurse to be at the maternal bedside longer than they would like to ensure adequate productivity on the unit. How one defines productivity has been a varying notion throughout the years. It's relative in terms of what we see as learning to support skin to skin meaning what's best for mom and baby as opposed to what's best for manpower on the unit...I think unfortunately what usually happens is staffing and the availability of resources trumps what is best for mom and baby.*

### Professional Obstacles

All the participants stated that they were unaware of any formal standardized policy or procedure that supported SSC after cesarean at their hospital. Lack of education among patients, nurses, and other healthcare providers was identified as an obstacle to implementing SSC after cesarean. Some nurses noted that a lack of education for all the nursing and medical staff on how to successfully implement SSC after cesarean is a barrier.

Almost all of the participants stated that buy-in from administration and other members of the healthcare team is crucial to facilitating SSC in the OR. One nurse mentioned that at her hospital, part of the time-out procedure prior to all cesareans is to ask if the whole healthcare team and the mother would like to do SSC in the OR. She mentioned that although this was part of their normal time-out process, they actually never do SSC in the OR due to lack of staff buy-in. This is a strange yet important finding that supports the need for consensus among the staff to support SSC and a formal policy that supports the practice.

Competing interests among the staff and workflow were factors identified by some of the participants. In this case, workflow can be described as the systems and processes used by the unit for cesarean recovery. A respondent stated: *I just feel like they're trying to get everything done in the OR*

*instead of trying to facilitate skin to skin.* Another participant mentioned that the NICU nurses take charge of the baby after birth, and their priority is to do assessments and measurements. She shared that the current workflow in place does not support uninterrupted SSC, *Initially the baby will be skin to skin for a couple of minutes and then moved to the warmer usually after five or ten minutes so they can do assessment and meds, height weight, all that stuff, and then back to skin to skin to do breastfeeding... it's just kind of a different flow. And the removal of the baby is not my favorite practice, but unless we change our whole flow of recovery, it's hard, I think to wait an hour to do things...it just doesn't work in the workflow.*

Inconsistency in teamwork and a lack of collaboration among personnel was another identified professional obstacle hindering consistent SSC after cesarean. A participant stated that practicing SSC in the OR was wholly dependent on which nurses, obstetricians, and anesthesiologists were working on the case, as some staff were more supportive of SSC than others. These responses illustrate the value of collaboration, and how it can either facilitate or obstruct SSC in the OR.



*The clinical and sometimes acute nature of the cesarean birth creates a perception that it is more of a surgery than a birth.*

### Logistical Challenges

Nurses were asked to discuss the differences between facilitating SSC after vaginal births versus cesarean births. They described several spatial and logistical difficulties, which they identified as barriers to SSC after cesarean. They stated that during a cesarean, there are usually more people and equipment in the room than during a vaginal birth. Many identified the concept of awkward maternal space as a barrier, citing there was not enough space on the mother's body (between her chest and open abdomen separated by the sterile drape) to safely and effectively provide SSC. Maternal positioning was a barrier as some nurses identified that during a cesarean, mom is usually flat on her back, unable to move, with her arms extended and strapped down onto arm boards. This positioning made some nurses wary of placing a "slippery" baby on the maternal chest space.

Some nurses discussed the concept of the anesthesia provider "ownership" of the head of the OR table, or the space where SSC will be occurring. A nurse stated, *the anesthesiologist, because they are at the head of the bed caring for the patient, they're the primary driver of what care happens in the OR*. Another nurse mentioned: *We have been working towards making skin to skin offered in the C-section rooms. So, we tend to do it if mom is stable enough and if the anesthesiologist agrees. There's a lot of communication with our anesthesiologist it seems like because they're the ones who are the most concerned with skin to skin happening, not so much the rest of the team in the room*. Other items, such as intravenous line and EKG lead placement, were factors to consider when planning SSC in the OR.

### Regional and Facility Variances

Many of the nurses mentioned geographical and facility-dependent variances on the practice of SSC after cesarean. Some nurses noted that they do SSC after all vaginal births and in the OR for some cesareans in one facility, but in another facility, the practice was to do SSC after cesarean in the recovery room. One participant, with experience at multiple facilities as a traveling nurse, noted that certain geographical locations are more informed and open to family-centered care and more "natural" approaches to birth, stating *In the past three years some hospitals are more open to different birth plans, and they're more centered around the family*. Another participant stated *Before I left (this state), it had switched from if patients asked for it, we would do it to 'this is what we do; is that okay with you?', and now I'm in (this state) and skin to skin is the expectation and the norm here*.

### Drivers for Change

Nurses discussed driving forces and attempting to facilitate practice change in several of their responses. Patient satisfaction scores, positive reviews of the hospital within the community, and meeting the expectations of the patients and their families were identified as potential drivers for change. One nurse shared *I think the biggest barriers are the providers saying 'We can't do it' because when I've asked moms, more moms than not want to do it in the*

*OR if you offer it to them*. Many of the nurses agreed with this response, stating that many of the patients and their families want and expect SSC after cesarean birth.

Many of the nurses mentioned the baby-friendly designation as a driver for practice change. Some were currently working in a baby-friendly hospital, and others were working toward achieving baby-friendly designation. The nurses working in a baby-friendly hospital performed SSC after cesarean on a regular basis to comply with goals of their unit and to maintain their designation. Nurses who were working on obtaining the designation knew that their current SSC practices need improvement to comply with the BFUSA (2012) initiatives.

All the nurses supported and were knowledgeable about benefits of SSC, which was another driver for change. All reported positive experiences with SSC in their professional practice, noting that SSC often helps the woman having a cesarean to cope with the chills and shivering that is common after cesarean birth. Concepts of perseverance and advocacy were discussed by the nurses. One nurse felt strongly about being a patient advocate, stating *To me, first and foremost, it's a patient advocacy issue, and if this is what is right for the patient and what the patient wants, then we need to be advocating for that*. Another noted the importance of persistence, stating that *sometimes people don't pay attention to the latest research supporting SSC, but you just have to. If you feel strong enough, you just have to keep persevering*. The general consensus among the nurses was that they do everything in their power to facilitate SSC and even if it does not happen in the OR, they were determined to have the mother-baby couplet in SSC in the recovery room. They reported often involving the birth partners by giving them the opportunity to do SSC if the mother was unable to do so. Some nurses mentioned that the supportive culture in their unit, which viewed SSC after cesarean as the expectation rather than the exception, helped to facilitate the practice.

## Discussion

The most significant finding was lack of formal policies and procedures supporting SSC after cesarean at any of the participant facilities, which may suggest providing immediate SSC is not considered a priority during the cesarean. The providers are busy completing numerous tasks, including the circulating nurse whose responsibilities include medical record documentation, instrument counts, and other tasks that seem to take precedence over facilitating SSC for the mother and newborn. Nurses who are regularly doing SSC in the OR reported that there are no formal policies that support this practice, although it was the expectation in their unit. Facility expectations to perform evidence-based care without a formal policy can lead to inconsistencies in care and increased safety risks. Inadequate staffing was considered to be a major barrier to the implementation of the SSC. The facilities with specific nurses assigned to the baby were available to facilitate SSC in the OR more consistently. All of the nurses perceived SSC as an effective evidence-based practice intervention and were well versed in its numerous benefits,

## SUGGESTED CLINICAL IMPLICATIONS

- Create formal policies and procedures that support and standardize SSC in the OR after cesarean birth. Involve key stakeholders in this process.
- Make sure there are enough nurses in the OR (one for the mother and one for the baby) to safely facilitate SSC for healthy babies after cesarean birth and for the duration of the procedure.
- Increase healthcare provider education on the benefits and safety of SSC after cesarean birth and how to make it a routine practice.
- Promote SSC after cesarean birth as a safe and effective practice to both patients and healthcare providers.
- Increase research efforts focusing on the practice of SSC after cesarean birth to evaluate aspects that promote safe care for mothers and babies and satisfaction with the birth experience.

yet the majority of the participants were employed in a hospital where a brief version of SSC was the norm. This finding suggests that the ability of the nurse to practice evidence-based care is governed by practice norms and rules set forth by the specific hospital unit and facility. Nurses who routinely practiced SSC in the OR reported that this was the norm and expectation for their facility and unit.

A recent study conducted in Australia by Stevens, Schmied, Burns, and Dahlen (2018) explored SSC at cesarean birth using ethnographic research. Stevens et al. detail the concepts of ownership of the maternal–newborn couplet during a cesarean, with the anesthesia providers “owning” the top half of the maternal body, the obstetrician “owning” the bottom half, and the nurse midwife “owning” the baby; this “ownership” of the maternal body contributed further to the maternal feelings of disconnect and loss of control in a cesarean birth. Their findings are similar to ours in which nurses identified the concept of anesthesia provider ownership as critical to providing SSC in the OR and their cooperation (or lack thereof) with SSC in the OR was the most important factor in its successful implementation. As in our study, Stevens et al. identified several factors that acted as barriers to SSC in the OR including, but not limited to: efficiency versus doing what is best for the mother and newborn, a large workload with decreased time to complete several tasks, and logistical challenges.

Our results were congruent with the findings of Zwedberg, Blomquist, and Sigerstad (2015), who explored midwives’ perspectives on providing SSC after cesarean. Some of their findings included a lack of education among providers and patients as well as issues with teamwork, collaboration, and workload as barriers to the practice of SSC after cesarean (Zwedberg et al.). They also found that SSC in the OR was hindered by challenges with team buy-in, a heavy amount of nursing duties, understaffing and deficits in staff education, and knowledge about the importance of SSC.

Redshaw, Hennegan, and Kruske (2014) reported that women who had vaginal births held their babies sooner and for longer periods of time than women who had ce-

sareans. The majority of the nurses in this project reported that they had never done SSC in the OR but were knowledgeable and very comfortable facilitating SSC after a vaginal birth. This finding further supports the discrepancies in SSC provided during vaginal births versus cesareans.

## Clinical Implications

The goal of this research was to assess perceived barriers to SSC in the OR after cesarean births. The literature supports SSC due to its many benefits for mothers and newborns and it is considered evidence-based practice. It is a challenge for nurses to practice evidence-based care by facilitating SSC after cesarean without formal policies and procedures to support and guide them. Once policies and protocols are developed, all members of the team who care for women during cesarean birth will need education on how to facilitate SSC in the OR. Hospital leaders need to ensure that appropriate nurse staffing levels are in place so that mothers and babies who have cesarean births can experience the benefits of SSC. Based on current nurse staffing recommendations (AAP & ACOG, 2017; AORN, 2014; AWHONN, 2010), one nurse specifically assigned to each baby born via cesarean birth who remains in the OR with the healthy mother–baby couplet until the surgery is done is necessary to make SSC in the OR routine practice. Future research could focus on effective policies and procedures that support SSC in the OR. It would be useful to elicit the feedback of obstetricians, anesthesiologists, and administrators on their perceptions of the importance of SSC in the OR.

## Limitations

There were some limitations to our study. The first was related to the sample selection process. Specifically, a sampling bias existed when using a purposive method in that the overall representativeness of the sample was skewed. The varied level of exposure to SSC in the OR is a limitation.

## Conclusion

Benefits of immediate SSC after birth are well known, and this practice is considered evidence-based standard of care. However, immediate SSC is not routinely practiced with women who have a cesarean birth. Our study identifies barriers to SSC in the OR as perceived by obstetric nurses. Obstetric nurses have the privilege of witnessing and influencing the pivotal moment when a woman becomes a mother. During a cesarean, obstetric nurses, along with the interdisciplinary healthcare team, are responsible for the care and safety of the mother and newborn. They are patient advocates with the power to act as change agents to increase SSC in the OR after cesarean birth. Thus, their perspectives on potential barriers to this practice are needed in order to facilitate effective operational change. ❖

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