

## Mother-, baby-, and family-centered cesarean delivery: It is possible

↙ The clinical processes at cesarean delivery can be refocused to enhance early maternal–infant bonding and improve the mother’s experience of the surgery

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Cesarean delivery is both a major surgical procedure and a momentous and miraculous event in the life of a family. Historically, the medical rituals and processes common to major surgical procedures have dominated the cesarean birth process. In most

obstetric units, babies born by cesarean delivery are brought to a newborn resuscitation unit, examined, cleaned, banded, administered medications, weighed, and swaddled before being introduced to the mother. In cesarean deliveries early skin to skin (STS) contact and early initiation of breastfeeding are not common.<sup>1</sup> In contrast, for vaginal delivery, many obstetric units have developed mother-, baby- and family-centered birth processes that emphasize immediate STS contact and the early initiation of breast feeding.<sup>2,3</sup>

Research indicates that the traditional surgical rituals and processes of cesarean delivery prevent mothers from connecting to important physical and emotional aspects of the birth process.<sup>4</sup> Practices that prevent early maternal-infant bonding and slow the initiation of breastfeeding may result in lower breastfeeding rates at 6 months of life and impact maternal behaviors.<sup>5,6</sup>

A new approach to cesarean delivery is the mother- and baby-centered cesarean delivery, also

known as the “natural cesarean” delivery. In this approach, there is a reduced emphasis on traditional surgical rituals and an increased emphasis on facilitating the early interaction of the mother and family with their baby.<sup>7,8</sup> The mother- and baby-centered cesarean celebrates the momentous birth event and encourages early mother–infant bonding.

### Clinical processes that support a mother- and baby-centered approach to cesarean

The mother- and baby-centered cesarean, with its focus on early STS contact and breastfeeding, is *not recommended* to be used routinely:

- with preterm births
- in emergency cesarean deliveries
- in cases where the baby is at risk for a low Apgar score.

The mother- and baby-centered cesarean is an *optimal approach*:

- when cesarean delivery is scheduled (such as in an uncomplicated repeat cesarean)

## Instant Poll



Has your obstetric unit developed cesarean delivery practices to initiate early mother–infant bonding? Do you think that immediate mother–infant skin-to-skin contact is safe at cesarean delivery?

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CONTINUED ON PAGE 12

- for a primary cesarean delivery following failure to progress in labor with a reassuring fetal heart-rate tracing.

**Prepare with calming music and a video preview.** Encourage the mother and family to select music to be played in the delivery room that they will find soothing.<sup>9,10</sup> If the cesarean is a scheduled procedure, have the mother and her support partners view a video clip of a mother- and baby-centered cesarean delivery. A 12-minute video, “The Natural Caesarean: A Woman-Centred Technique” by the Gentle Childbirth Foundation is particularly well done ([www.youtube.com/watch?v=m5RIcaK98Yg](http://www.youtube.com/watch?v=m5RIcaK98Yg)).

**Adjust anesthesia preparations to support STS contact and early breastfeeding.** To accomplish this, free the mother’s dominant arm and chest for contact with the newborn by placing the oximeter, intravenous catheter, and the blood pressure cuff on the nondominant arm. Place the echocardiogram leads on the back or far laterally to facilitate early chest contact between mother and baby.

Recent evidence does not support maternal supplemental oxygen for routine uncomplicated cesarean delivery. Consider allowing the mother to breath room air without the bothersome mask.<sup>11,12</sup>

**Use a gentle surgical technique** that reduces the use of cutting, such as the Misgav Ladach cesarean technique.<sup>13,14</sup>

Offer the mother and her support partners the option to view the birth of their baby as active participants. If the mother desires to see the birth of her newborn, use clear drapes to permit the patient to view the birth of the head of the newborn (**FIGURE**), or drop the drapes prior to the birth of the head of the newborn.<sup>15</sup> Raising



Clear drapes facilitate the mother’s view of the birth during cesarean delivery.

the head of the table can facilitate the mother’s view of the birth of her baby.

For mothers who have enlisted the support of a doula, consider welcoming the doula along with one other support person into the operating room for the birth.

**Slow the delivery process.** Gently deliver the head and leave the baby’s body in the uterus for a few moments. Some authorities believe that the contraction of the uterus around the body of the fetus, along with the initiation of breathing and crying will help clear the fetal respiratory system of fluid. Delay cord clamping to permit autotransfusion and improve neonatal iron stores.<sup>16</sup>

**Plan for immediate STS contact.** Immediately transfer the baby to the mother’s chest. Dropping the surgical drapes prior to delivery will help with this transfer. If the mother’s chest is not available or accessible for any reason, consider early STS contact with the father.<sup>17,18</sup> Banding and vitamin K administration can be performed with the baby on the mother’s chest.

**Encourage intraoperative breastfeeding.** Early contact between the infant’s lips and the mother’s nipple is associated with increased initiation and duration of breastfeeding. Breastfeeding should be started as

soon as a possible after birth, preferably within the first hour of life.<sup>19,20</sup> Weighing, measuring, and routine care for the infant can be delayed until after the first feeding is completed.

**Keep the mother and baby together.** Rather than separating the mother and newborn for the trip to the recovery area, have the mother cradle the newborn on her chest during the transport process.

## Challenges

**Transient tachypnea of the newborn.** Scheduled cesarean delivery is associated with an increased risk of transient tachypnea of the newborn (TTN).<sup>21</sup> In a review of more than 29,000 deliveries, the incidence of TTN was 3.1% with scheduled cesarean delivery and 1.1% with vaginal delivery.

The plan to promote early STS contact and keep the newborn with the mother may need to be altered if the newborn needs more intensive support at the resuscitation table for

## A resource for your patients

### *Easy Labor: Every woman’s guide to choosing less pain and more joy during childbirth*

Camann W, Alexander K. Ballantine Books.

© 2006 William Camann, MD, and Kathryn J. Alexander, MA

This book explains the pain-relief options available to mothers who enter labor and find that natural techniques don’t effectively manage their pain. The book provides proven approaches to combine medical and natural techniques to ensure the most comfortable labor possible.

symptoms of TTN; symptoms are often apparent at birth, or TTN is diagnosed within 2 hours after delivery. Symptoms include:

- respiratory rate faster than 60 breaths/min (most prominent feature)
- cyanosis
- increased work to breathe (including nasal flaring, intercostal and subcostal retractions, and expiratory grunting).

The syndrome typically resolves within 12 to 72 hours after diagnosis.

**Thermal regulation.** Although preterm infants are at greater risk than term infants for hypothermia, some term infants will become hypothermic.<sup>22</sup> Careful attention to ensuring that the baby is not left exposed to the cold operating room temperatures is helpful to reduce the risk of hypothermia. Early STS contact at cesarean delivery has been reported to improve maintenance of neonatal thermoregulation.<sup>23</sup>

**Monitor the safety of the baby on the mother's chest.** If the cesarean surgery triggers an episode of nausea and vomiting, the baby may need to be removed from the mother's chest until the episode is resolved. An additional nurse may be required in the operating room to safely monitor the baby on the mother's chest as the surgery is completed.

**Additional clinicians at the head of the surgical table.** Moving the initial care of the infant to the mother's chest increases the number of clinicians who need access to the head of the surgical table; this may create a "traffic jam." The anesthesiologist and nurse will need to cooperate to share this space, and also to include any support persons. Moreover, the operating obstetrician and assistant will need to understand that the area above the surgical field may be a bit "busier" than they are used to.

Obviously there may be limitations in the event of any surgical or anesthetic instability. However, as long as the procedure remains uncomplicated, as most cesareans are, than early infant care at the head of the operating table, or even directly on the mother's chest, is a very achievable goal. Educational efforts directed at all stakeholders (anesthesiologist, obstetrician, pediatric and nursing staff) will facilitate the introduction of this model of care.

### It is possible.

Is it possible to transform a major surgical procedure—a cesarean delivery—into a mother-, baby- and family-centered experience? For many cesarean delivery procedures the answer is a resounding, "Yes." Re-engineering the clinical processes that surround the traditional cesarean delivery requires the commitment and cooperation of many disciplines. Obstetricians, anesthesiologists, and maternity nurses are the leaders who must work together to facilitate this important practice change. 🍎



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