FEATURED ARTICLE

Whose Choice? Advocating Birthing Practices According to Baby's Biological Needs

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ABSTRACT

Modern western society and media often present the mother's choices for her birth as paramount. Various gurus provide the mother with often conflicting advice. But the reality is that childbirth often becomes a medicalized event with many interventions and less than ideal outcomes. In many instances, the choices are made to suit health professionals and hospital routines rather than the mother. All the aforementioned are based on ideas and assumptions which predate evidence-based medicine and recent neuroscience. In reproductive biology, the newborn is an active participant and agent in birthing (Alberts, 1994). Based on this, the perspective which has been lacking is what is best for the *baby*; our choices should be primarily based on the basic biological needs of the infant.

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The American Academy of Pediatrics (AAP) recently published a policy statement called "Early adversity, toxic stress and the role of the pediatrician" (Garner & Shonkoff, 2012). The accompanying technical report (Shonkoff & Garner, 2012) describes an "ecobiodevelopmental model" for translating developmental science into lifelong health. The eco stands for the ecology, the environment; and for newborns, the environment is the mother's body. Mother's body provides "buffering protection of adult support" that prevents harmful epigenetic changes taking place during sensitive periods of development (Meaney & Szyf, 2005; Shonkoff & Garner, 2012). Although not emphasized by the report, these sensitive periods operate in the early hours and days of life. Mother's body is also the source of sensory input that drive the "needed neural processes" (Graven, 2004) that define developmental neuroscience. In parallel, mother's body is also the source of basic biological needs (the bio of the model) that provide physiological regulation and stabilization. Prolonged regulation leads to establishment of internal set points that will determine the resilience over the life span (McEwen & Seeman, 1999). The key objective of this early development is establishing

emotional resilience and social competence, and the brain pathways for this are laid down starting at the first hour of birth (Schore, 2001). It is this development (third part of model) that is the focus. Life sciences theory emphasizes that this is only accomplished "in the light of mother's body" (Hrdy, 1999). Breastfeeding plays a key role in this development, and a separate AAP policy statement emphasizes the particular importance of this (Eidelman, 2012). In the early hours of life, a platform is laid for sustained breastfeeding and biological bonding with the mother, out of which grows a secure attachment for the child (Hofer, 2005). Together, these processes lay the platform for subsequent adult health, both physical and mental. Any adverse events affect the life span of the individual, with negative impact on learning and education, public health, and economic productivity (Garner & Schonkoff, 2012; Schonkoff & Garner, 2012).

WHAT DOES THE BABY MOST NEED AT THE MOMENT OF BIRTH? ONLY MOTHER

In the following we "translate" this science to informed birthing practice. To make the best transition to life in the outside world, place the baby naked in skin-to-skin contact on the mother's bare chest immediately after birth and dry the baby, covering them both. The baby inside the mother has been warmed, fed continually, and held and protected in the dark, so when the baby is born, we need to adapt the sensory environment with dim light, warmth, and quiet to aid healthy adaptation. The baby is biologically expecting to hear the mother's familiar voice and heartbeat, the mother's smell, the taste of breast milk, and warmth from her body. With these sensations, the baby will have a more stable heart rate, blood pressure, and breathing. All of these sensory signals from the mother's body help the baby to find healthy set points for all aspects of physiological function, which may last the baby's entire life. In the right place—mother's chest—the baby will be warmer and have higher blood sugar (Christensson et al., 1992). As with all mammals, human babies are born knowing how to breastfeed. Widstrom et al. (2010) highlight the need for supporting and not interrupting nine essential stages of self-attachment at birth. Any interruptions will make the self-attachment more difficult. Knowing the impact of immediate skin-to-skin contact, we need to make every effort to provide this at cesareans too (Smith, Plaat, & Fiska, 2008).

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The baby needs to stay in skin-to-skin contact with the mother for the first 2 hours at least and then remain in skin-to-skin contact for the first 24 hours to keep uninterrupted access to the breast. The father or other family member can also do skin-to-skin contact during this time. If parents prefer, a small nappy or diaper can be put on the baby. If it is cold, a small cap may be needed. Holding a clothed baby over mother's clothes is *not* skin-to-skin contact.

Any separation of mother and baby disrupts essential brain development, which is required for bonding. Stress hormones rise rapidly in the baby and destabilize the baby. Stress hormones remain high during separation, 30–60 minutes of skin-to-skin contact is required to return to healthy baseline.

There is strong evidence for the importance of colostrum for the first few days to improve immunity (Edmond & Bahl, 2006; Eidelman, 2012). So even if a mother has chosen not to breastfeed, the baby's right to this immune booster should be honored and take preference. Getting an early start to breastfeeding, which stimulates the release of prolactin and oxytocin in the mother's brain, will start the breasts producing milk on the second or third day.

Breastfeeding is defined by the AAP as the "normative standard" (Eidelman, 2012) because it is *normal* mothers should be warned of the risks of not breastfeeding. It is an important role of health professionals to update their knowledge of these facts to counteract the aggressive advertising of the formula companies with their claims, which are false and unscientific (http://www.infactcanada.ca/RisksofFormulaFeeding.pdf).

CURRENT PRACTICES DISRUPT THE BIOLOGICAL PROCESSES

Most current birthing routines in modern hospitals disrupt the previously discussed biological processes. Our old hospital routines made sure the physical needs were provided for survival, but bonding and attachment were neglected.

It is important that nurses and midwives and doctors adjust their routines to accommodate meeting the basic needs of the newborn (Eidelman, 2012). A single seemingly innocuous intervention can

destabilize the baby, which could lead to a further "cascade of interventions" (Emerson, 1998).

Change can be challenging for all concerned. Hospital routines established for many years are in fact, often based on false assumptions not supported by the latest neuroscience nor tested in randomized trials. Above all, our care has been based on separated infants for the last 100 years; modern neuroscience shows that separation causes significant harm. Furthermore, we as health professionals have a responsibility to inform parents of this knowledge and help them to make informed choices with appropriate expectations. It is also challenging for parents whose societal expectations are not aligned with the baby's basic biological needs, which we should also define as the baby's basic human rights. Nevertheless, it is necessary to put baby's needs first.

The emotional bond and the empowerment of mother to care for her baby are vital to well-being for life. This requires a mental shift, a new awareness. Although we as health professionals are good at the technological care that keeps the baby's body healthy and surviving, we are often unwittingly not supporting the close vital mother–infant bond forming.

A VOICE FOR THE BABY—THE KANGAROULA

We have worked closely with Kangaroo Mother Care for 25 years, and some of the current neuroscience described previously arises out of research on skin-to-skin contact. Jill is also a practicing doula, supporting mothers during labor in their choices. Increasingly, I feel the need to present the evidence to the parents about the impact that their choices have on the baby and speak from the baby's perspective. I therefore call myself a "kangaroula," (contracted from "kangaroo doula"). This could be seen as an expanded role of the doula, being support for the mother but emphasizing the infant, based on current neuroscience. So in addition to supporting the mother during labor, I am a voice for the baby's needs before and after birth, an advocate for the baby's birth right.

The role of the kangaroula is therefore to support parents to support their newborns. This includes explaining the technical terminology the staff use, giving information on choices that support the baby in needed neural processes (Graven, 2004), and buffering protection of adult support for brain development (Shonkoff & Garner, 2012). This also involves mediating between parents and staff and supporting staff in adjusting routines. Kangaroula support is essentially about counseling and extends from preterm care through to parenting for a secure attachment (the latter not discussed here; Eidelman, 2012).

What happens to the mother and baby before birth and during labor has a major impact on the healthy start to their relationship.

NEW EVIDENCE FOR INFORMED CHOICE

Interventions, unless for medical emergencies, are interferences in a natural process and should be avoided if possible. Although all the various interventions and treatments available have a place and can be life saving, we need to ask if they are really necessary and weigh the benefit and risk more carefully. Parents are seldom given any kind of informed choice or information on less invasive or disruptive alternatives. Putting the unborn child's basic needs first will profoundly alter many of our current hospital routines.

What happens to the mother and baby before birth and during labor has a major impact on the healthy start to their relationship. The major impact is on the health and well-being of the *baby*, but this often goes unnoticed. It is time that the rights of the newborn are recognized. The role of the kangaroula is to do this.

During Labor

In modern cases where the choice is a "normal" birth with an induction to start labor and epidural for pain relief, this is not a normal birth. It is a major intervention. An induction using synthetic oxytocin fast-forwards the labor, starting it before the baby is ready. This stresses the mother and the baby, not giving time for the mother's and the baby's hormonal coordination and natural processes. The kangaroula supports the mother in putting this perspective into the decision-making process. Too-high oxytocin levels in labor make the oxytocin levels in the mother lower 2 days later, making mothering more difficult (Alberts, 1994; Phaneuf, Rodriquez Liñares, TambyRaja, McKenzie, & López Bernal, 2000). Only intensive breastfeeding can restore healthy levels.

Demerol (pethidine) is often given to mothers in labor for pain relief. There is evidence that this has a detrimental effect, making the baby floppy and unresponsive at birth (Nissen et al., 1995) and the mother less tuned-in to her newborn (Hale, 2006).

This negatively impacts their ability to self-attach and breastfeed. The doula is as effective for pain relief and has no side effects (Klaus, Kennell & Klaus, 2002).

Active labor involves being vertical and walking around, and crouching is nature's way of increasing the birth canal size for the baby's head to be born. With an epidural, the mother cannot feel her legs so she lies in bed and needs electronic monitoring. Often, this is done while she is lying on her back and the fetal blood and oxygen supply is thus compromised. The resulting fetal distress can lead to cesarean or other interventions such as forceps or vacuum assistance. The epidural also blocks oxytocin stimulation to the mother's brain, affecting the quality of her mothering experience (Swain, 2011) and later breastfeeding success (Torvaldsen, Roberts, Simpson, Thompson, & Ellwood, 2006). Again, the doula is more effective.

At Birth

The kangaroula supports the mother and the baby as a unit, especially in the first hour after birth. It is skin-to-skin contact that is the right place where early stabilization occurs (Bergman, Linley, & Fawcus, 2004). The kangaroula also adjusts the sensory environment to decrease stress and to support the needed neural processes for early bonding and self-attachment. The baby can be assessed for Apgar score on the mother's chest, with the baby covered. All other routines of weighing, bathing, measuring, eye care, vitamin K, and so forth can be done hours later after the baby's first essential peaceful 6 hours of early breastfeeding (Eidelman, 2012).

In many countries around the world, mothers are choosing to deliver by elective cesarean. Although this has advantages for the working mother to have control over the date when her baby is born (and when it is convenient for the doctor), and although it means the mother can avoid the pain of labor, a cesarean is still a major abdominal operation and carries with it major risks for the mother of infection, anesthetic risks, and long recovery time. Perhaps most importantly, the pain is just postponed to the time when she should be caring for her baby, making her less able to look after her baby effectively for the first few days (Swain et al., 2008).

Cesarean also carries risks for the baby. Evidence shows that way for a baby to be born, increasing both mortality and morbidity (De Luca, Boulvain, Irion, Berner, & Pfster, 2009; MacDorman, DeClercq, Menacker, & Malloy, 2006). When a cesarean is necessary, the kangaroula is especially needed to protect the baby, both from the harsh sensory environment of the operating room and further unnecessary separation and interventions (McClellan & Cabianca, 1980).

After Birth

Nursing routines often include taking the baby into a nursery "so that the mother can sleep." Although this might sound tempting for the mother, the stress effects on the baby disrupt bonding and stabilization. Mothers who have their babies with them actually sleep better and have less anxiety. Mothers may, however, need to know this beforehand to make this choice. The kangaroula supports the mother and the baby in this kind of choice in the days that follow birth.

ROLE SHIFT FOR HEALTH PROFESSIONALS

Our new knowledge brings the need for a shift in the substance of care, in two major respects. First, care must be centered on the "mother–infant unit" or dyad. This starts at birth with skin-to-skin contact and should be built on the maintenance of their togetherness. Second, the shift should be for health professionals to no longer be the ones who do the practical care of the newborn baby, instead they now need to become mentors, teaching both parents the skills needed to start parenting their baby (Westrup, 2004). The essential part is empowering the parents with both practical skills and

confidence in their new role so that by the time they go home, the mother is able to bathe her own baby and breastfeed confidently. Other skills to teach parents will include care of umbilical cord, reading baby's early stress signals to avoid stress, the importance of small frequent breastfeeds, not just for the food but also for the wiring of the brain of the newborn, and how essential sleep cycling is for the brain circuits. The kangaroula supports all these aspects.

Health professionals, if you can send parents home with their newborn baby competent and confident and no longer needing you, you have done your job well. Most importantly, your goal should be to have parents leave the nursery emotionally attached to their baby; then you can be confident that this baby is off to a good start in life.

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