Continuing Education Module

Give Them *The HUG*: An Innovative Approach to Helping Parents Understand the Language of Their Newborn

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ABSTRACT

Research suggests, and perinatal educators experience, that misunderstanding newborn behavior can undermine a new parent's confidence, decrease breastfeeding success, interfere with bonding, and even contribute to neglect and abuse. This article examines current literature and focuses on three skills parents need in order to become confident and effective mothers and fathers: understanding a newborn's state, reading an infant's cues, and appreciating a baby's capabilities. Using language that is family-friendly, concise, and clear, this article describes an innovative program, called "The HUG," which provides this information and gives perinatal educators new skills and techniques for explaining newborn behavior to parents in order to help parents understand, enjoy, and attach to their baby.

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Lamaze International has created an independent study based on this article. Please visit the Lamaze Web site (www.lamaze.org) for detailed instructions regarding completion and submission of this independent study for Lamaze contact hours.

BACKGROUND

In their publication on early childhood development, *From Neurons to Neighborhoods*, Shonkoff and Phillips (2000) confirm what childbirth educators have experienced: The newborn period sets the stage for a child's development in the years ahead and offers a rich opportunity to positively impact the future of a child and his/her family. Based on their research, Shonkoff and Phillips offer the following conclusions:

- Early childhood experiences affect the development of the brain and lay the foundation for intelligence, emotional health, and moral development.
- Healthy, early development depends on nurturing and dependable relationships.
- How young children feel is as important as how they think.

Additional research findings suggest that mothers' ineffective responses to their infant's cues result in "diminished infant responses, lower intelligence, depression, social incompetence, and high-risk behavior [in the child later in life]" (Amankwaa, Pickler, & Boonmee, 2007, p. 25).

Along with confirming the importance of the early newborn period and the negative impact of strained newborn experiences, recent research expands on perinatal educators' understanding of who a baby is and of how mothers and fathers learn to become effective parents (SmithBattle, 2007; Tedder & Register, 2007). Parent-child bonding and attachment continues to be the basis for successful parenting (Karl, 2004). Decades of research have identified factors that contribute to or detract from maternal attachment. Furthermore, findings from recent studies of paternal attachment demonstrate that the more a father is involved in providing infant care, the sooner he develops feelings of closeness to his infant (Goodman, 2005). As White, Simon, and Bryan (2002) note, "Consistent, sensitive, responsive care giving [by mothers or fathers] provides the foundation for infant development, without which infants have been found to experience growth failure, exhibit anxious behavior, and fail to develop appropriate social skills" (p. 295). Cognizant of the importance of this time in a family's life, the perinatal educator can be the trusted, frontline provider of both information and support that can have a positive impact on new parents and their babies for years to come.

INTERVENTIONS THAT MAKE A DIFFERENCE

Two large review articles (Gardner & Deatrick, 2006; Mercer & Walker, 2006) recently analyzed and categorized many intervention efforts regarding mothers' influences on their infant's development in order "to help clinicians understand the usefulness and limitations of reported interventions and to identify areas for further research" (Gardner & Deatrick, 2006, p.28). Mercer and Walker (2006) reviewed studies on infant caregiving, infant interaction, maternal-child attachment, the mothering role, and the patient-provider relationship. Gardner and Deatrick (2006) examined skin-to-skin care, infant-focused teaching, counseling, and group therapy as forms of intervention. Though differing in their approaches, each literature-review project sought to achieve the following goals:

- provide information about infant states, cues, capabilities, and care (Gardner & Deatrick, 2006);
- address intervention with an *interpersonal* focus (Mercer & Walker, 2006);
- intervene by discussing a parent's *individual* child rather than providing general information (Gardner & Deatrick, 2006);
- demonstrate an infant's behavior rather than just explain behavior (Mercer & Walker, 2006); and
- if possible, provide multiple levels of intervention to enhance results (Gardner & Deatrick, 2006).

Although the two review articles examined programs that varied in their modes of intervention and in their effectiveness, all reviewers concluded that certain intervention outcomes are important:

- improved maternal knowledge of infant cues (Mercer & Walker, 2006);
- increased maternal confidence (Mercer & Walker, 2006);
- increased maternal sensitivity (Mercer & Walker, 2006);
- increased mother-infant interactive skills (Gardner & Deatrick, 2006); and
- increased positive maternal perception of infant at 1 month of age (Mercer & Walker, 2006).

Although not included in the review articles by Gardner and Deatrick (2006) and by Mercer and Walker (2006), results from a number of other intervention projects regarding mothers' influences on their infant's early development deserve attention: for example, the Newborn Behavioral Observations System (Sanders & Buckner, 2006), Tender Beginnings (Brown, 2006), Neonatal Intensive Care Unit Network Neurobehavioral Scale (Lester & Tronick, 2004), and Healthy Steps (Crowley & Magee, 2003). Results from these studies were not included in the two large review articles, presumably because they were completed after the review articles were published. However, these additional studies offer effective intervention tools and show similar results to Gardner and Deatrick's (2006) and to Mercer and Walker's (2006) conclusions.

A WORD ABOUT WORDS: LANGUAGE MATTERS

Although the research projects described above addressed content, goals, and outcomes regarding interventions to improve parental attentiveness to infant cues, the authors did not mention the importance of the language used in the interventions. One might sample rhetorical and communication literature for help in this regard. Three characteristics typically identify language that effectively informs: clarity, concreteness, and association of

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new ideas with familiar ideas (Ehninger, Gronbeck, & Monroe, 1980). Clarity is enhanced by a clear organization of ideas and an intentional use of the power of three: According to Atkinson (2004), two concepts are not enough to be convincing; a fourth concept may be tuned out, but a third idea will be anticipated and create a sense of completeness. In order for listeners to grasp new ideas more easily, they must associate new ideas with concepts they already know and understand (Atkinson, 2004). The skillful use of metaphors and alliteration also helps listeners remember new information (Atkinson, 2004).

BIRTH OF "THE HUG" PROGRAM

Based on the research and rhetorical literature described above, the "Help–Understanding–Guidance" (HUG) program was developed for young families (Tedder, 2006). In an effort to improve parents' understanding of how to interpret and respond to their infant's special ways of communicating, The HUG program includes an in-service program for professionals, an educational Web site, which features a parent educational blog, and a 20-minute educational DVD with an accompanying handout for parents, available in English and Spanish.

Log on to The HUG Web site (www.hugyourbaby.com) to learn more about the program, join in on the conversation at The HUG blog, and order The HUG educational video (a brief clip is also available for viewing on the Web site).

The following paragraphs describe ways to identify an infant's cues and how The Hug program promotes this understanding between parents and their child. Perinatal educators can use this information to acquire new skills and techniques for explaining newborn behavior to parents in order to help them understand, enjoy, and attach to their baby.

WHAT PARENTS NEED TO KNOW

Given the range of material that could be addressed at this crucial time in a family's life, what skills do mothers and fathers need to acquire in order to become confident and effective parents? My review of the above research suggests three skills are needed:

1. *understanding a newborn's state* (Barnard & Sumner, 2002; Brazelton, 1995; Hotelling, 2004; White et al., 2002);
2. *reading an infant's cues* (Amankwaa et al., 2007; Barnard & Sumner, 2002; Nugent, 1985; Sanders & Buckner, 2006; White et al., 2002); and
3. *appreciating a baby's capabilities* (Brazelton, 1995; Mercer & Walker, 2006).

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Understanding a Newborn's State

"Is my baby awake or asleep?" "Is my baby about to cry or drift off to sleep?" "Why won't my baby look at my face?" The issue of a newborn's state has been addressed in child development literature for decades (Lamb, Bornstein, & Teti, 2002). State is important because it serves as a marker for nervous system integrity, determines how the baby presents himself, and influences adult behavior (Brazelton, 1995; Lamb et al., 2002). Recognition of an infant's state is important to assure adequate feeding, enhance better sleep, and promote more interaction. The speed of movement between states, the parent's understanding of where the baby is on the state continuum, and the parent's ability to impact a child's state all contribute to a parent's sense of how successfully he/she parents his/her child.

The HUG: "What Zone Is Your Baby In?" Informed by medical research and by rhetorical literature (Atkinson, 2004; Ehninger et al., 1980), which emphasize using familiar terms to describe new ideas, The HUG program describes newborn "zones" rather than states. Consistent with the power of three, The HUG identifies three newborn zones: the Resting Zone (the sleeping states); the Ready Zone (the alert state in which a baby is ready to eat and ready to interact); and the Rebooting Zone (the fussing or crying state in which a parent's help is needed). A perinatal educator can explain that babies, like computers, sometimes get overloaded with information. To extend the metaphor, babies overloaded with information (from either inside or outside of their bodies) must sometimes "reboot" in order to be available for more information and interaction. Though rebooting is occasionally necessary in computers (and babies!), one can learn to take prompt and effective actions to prevent or diminish the severity and frequency of this event.

Reading an Infant's Cues

The HUG program reinforces the view that babies come equipped to help parents learn to care for them. This viewpoint moves the burden from parents feeling they need to learn everything *themselves* to the realization that *their baby* is an active

participant in this process. Focusing parents' attention on their baby's behavior can be a first step to helping parents read a newborn's cues.

"Reading cues and responding to the infant's specific behaviors help parents see their babies as people with whom they can relate and have meaningful interactions" (White et al., 2002, p. 297). In the premature infant, this reading of cues is especially important. "Infants whose mothers 'pick-up on' their infants' cues, whether they be cues for feeding, fatigue, or readiness for interaction, may develop more normal patterns of behavior, which ultimately increases their likelihood of survival and quality of life" (Amankwaa et al., 2007, p. 29).

Stress Cues and Crying. Physiologic changes in skin color, breathing, and muscle control are a baby's ways of signaling stress. Gaze aversion and moving to a less available state can indicate a newborn's effort to reduce overstimulation (Liaw, Yuy, & Chang, 2005). Work by T. Berry Brazelton (1992, 1995) is especially salient in demonstrating the value of helping parents appreciate babies' efforts to help calm themselves. According to Brazelton (1992, 1995), self-comforting behaviors such as bringing a hand to the mouth, using the fencing reflex, or averting a gaze can be seen as proof of a child's competence. Parents who respond promptly and consistently to their infant's cries and distress raise infants who show greater interest in exploring their environment and who actually cry less the second year of life (White et al., 2002).

The HUG: "And what if your baby transitions to the rebooting zone?" Using the rhetorical technique of associating new ideas with ones already known, The HUG program uses the phrase, "a baby is sending out an SOS" (Sign of Overstimulation), instead of referring to a baby as showing a "stress response." Use of this SOS metaphor conjures up the image of sending out a smoke signal from a deserted island. Such an image communicates that the baby needs help and that the parents can come to the rescue. The perinatal educator may find this SOS concept more acceptable to parents than the concept of a baby's "stress response." ("Don't tell me my new baby is stressed out already!" one mother exclaimed.)

The HUG program optimizes clarity by describing two types of SOSs often seen before the Rebooting Zone occurs: body changes and behavioral changes. SOS body changes include changes in skin color (getting pale or red), breathing (choppy, irregular), or muscle action (jerking or tremors). The behavioral SOSs described and demonstrated in The HUG program include "Spacing Out" (moving from an alert state to a drowsy, uninvolved one), "Switching Off" (gaze aversion), and "Shutting Down" (moving from an alert state to a drowsy or a sleep state). Use of repetition, alliteration, and action verbs helps both parents and professionals watch for, identify, and remember these behaviors.

The HUG program suggests specific steps parents can take when their baby "reboots." In addition, perinatal educators can use The HUG material to help parents look for a newborn's efforts to contribute to self-calming. The fencing reflex ("which looks like he is sword fighting") and bringing her hand to her mouth, as shown in The HUG's educational DVD, are common newborn behaviors that can easily be overlooked or dismissed as unimportant. The HUG information helps parents both notice their baby's efforts to self-calm and see such behavior as a sign of their baby's competence. "Spacing Out," "Switching Off," and "Shutting Down" behaviors are described so that parents will not interpret these behaviors as rejection by their baby (Parlakian & Lerner, 2006).

After parents learn to recognize an SOS, they next learn what actions will help their baby. Perinatal educators can demonstrate holding the baby's hands to his chest, swaddling the baby, swaying the baby, or providing for sucking (after breastfeeding is well established) as interventions to calm a fussing or crying baby (Brazelton, 1995). Imparting this information in a timely and individualized way supports the literature's conclusion that a parent's prompt and consistent response to infant distress enhances both a child's development and a parent's sense of confidence.

Cues for Effective Breastfeeding. Donna Karl's (2004) work on breastfeeding and the "Latchable State" reveals that a mother's understanding of state and infant cues can make the difference between breastfeeding success and failure. She notes that mothers continue breastfeeding when they perceive their baby as being satisfied. These mothers are reassured by their infant's feeding cues such as establishing a good latch, sucking well, and appearing content. However, Karl also describes nonfeeding cues that convey satisfaction to the mother: the baby's ability to organize his/her states, to calm down, to become alert, to cuddle, and to make

and maintain eye contact. It is noteworthy that Ekstrom and Nissen (2006) demonstrate that incorporating state and cue information (along with continuity of care) into breastfeeding support not only enhances breastfeeding but also strengthens a mother's feelings for her baby and enhances her nonfeeding interactions with the baby.

The HUG: "Get your baby to the Ready Zone to eat." Having described the three newborn zones, The HUG program recommends techniques (such as Kangaroo Care and the use of the normal startle reflex) for getting a sleepy baby to the Ready Zone to eat (see research described above). In addition, The HUG material encourages a parent to watch for and respond to SOSs in a more fragile child in order to enhance breastfeeding (see research described above.) Fathers of breastfed babies who feel left out of the breastfeeding process (Liaw et al., 2005) might be proud of their abilities to recognize zone changes and important SOSs and, thus, feel closer to their infants. A mother who uses The HUG information to appreciate her baby's abilities and needs may discover renewed determination to overcome any challenges of breastfeeding. Remembering that nonfeeding cues contribute to breastfeeding success, the parent's skill in noting an infant's abilities to get to the Ready Zone, calm down, and interact may actually enhance feeding.

Cues for Sleep. Misunderstanding normal newborn sleep cycles is common and can lead to ongoing sleep problems for babies and their parents (White et al., 2002). One typical misunderstanding is for a parent to think that a newborn is waking up when, in fact, the baby is only transitioning from deep/still sleep to a light/active sleep cycle. A longitudinal Australian study concluded that sleep problems in infants (for various reasons) were associated with increased maternal depression (Hiscock & Wake, 2001). Other research findings show that mothers with persistent depression are three times more likely to have a child hospitalized, twice as likely to use corporal punishment, less likely to have smoke alarms in their house, and half as likely to follow back-to-sleep guidelines (Chung, McCollum, Elo, Lee, & Culhane, 2004).

The HUG: "In light sleep, the baby's brain is really growing and getting smarter." Understanding the significant consequences of sleep problems in babies (Hiscock & Wake, 2001), The HUG program provides sleep information and demonstrates the two sleep cycles: "deep/still" and "light/active" sleep (Brazelton, 1995). Breastfeeding is enhanced when mothers see that a baby can transition from light sleep back to deep sleep. If it is time for a baby to eat, parents see that a baby can be more easily roused from light/active sleep than from deep/still sleep. As suggested by the intervention literature, an educator who helps parents recognize what sleep cycle their baby is in will provide more effective teaching than an educator who offers parents only general information on infant sleep (Gardner & Deatrick, 2006).

Teaching parents techniques that bring a baby to an alert, interactive state will foster parent-child interaction.

Appreciating a Baby's Capabilities

Babies have come to be seen as "talented" (per T. Berry Brazelton), "precious" (per Hanus Papousek), "amazing" (per Marshall Klaus), or "extremely competent" (per T.G.R. Bower) (Chamberlain, 1998, p. xii). Because engagement is crucial to parent-child attachment, appreciating an infant's ability to engage with his/her parent is a prerequisite to early attachment. Teaching parents techniques that bring a baby to an alert, interactive state will foster parent-child interaction (Brazelton, 1995, 1999; Nugent, 1985).

The HUG: "The Baby Amazes Her/His Parents With All She/He Can Do!" Helping a parent recognize the Ready Zone and use techniques to bring a baby to that zone is a prerequisite for play and interacting. The HUG materials explain that babies sometimes have a hard time "multitasking"—that is, controlling their body and getting to the Ready Zone to eat or play. The HUG program demonstrates that parents holding a newborn's hand against his own chest, swaddling the newborn, and/or encouraging sucking (after breastfeeding is well established) can enhance a baby's ability to pay attention.

Parents will learn from The HUG materials that babies take three steps in learning to pay attention: getting quiet and still, turning in the direction of a stimulation, and both turning toward and looking at the stimulation (Brazelton, 1995). A perinatal educator who helps a father see that his baby can play ball *now* (instead of waiting for him to get older) reflects the literature's call to engage fathers in reciprocal interactions that validate the father's relationship with his child and increase the father's self-esteem

(Goodman, 2005). Reviewing techniques that bring out the baby's best behavior creates opportunities for parents to see how their actions matter and to further enhance the bonding and attachment process (Nugent, 1985; White et al., 2002).

INCORPORATING THE HUG PROGRAM INTO PRACTICE

In accordance with conclusions reached by the literature reviewed above, The HUG program is designed to be an *interactional* and *individualized* intervention. Incorporating The HUG program into a practice is a three-step process:

1. Perinatal educators (childbirth educator, social worker, lactation consultant, and hospital/clinic/home visiting nurse) receive The HUG in-service program or take the online, 2-hour continuing education course available through The HUG Web site.
2. Parents are referred to The HUG's parent educational Web site and blog, are encouraged to watch The HUG educational DVD, and are given The HUG handout (in prenatal or postnatal classes and/or during a hospital stay) to gain general information about a newborn's capabilities and ways of communicating.
3. Professionals use The HUG language and techniques with their patients to reflect on an *individual* child's abilities and challenges. Because research indicates the benefit of multilevel interventions (Gardner & Deatrick, 2006), using The HUG program in a number of settings is a strategy likely to enhance positive results.

CONCLUSION

Using The HUG program with young families confirms a parent's perception of what research asserts: The newborn period is a critically important time for establishing the building blocks for future intellectual, social, and emotional growth (Shonkoff & Phillips, 2000). "The sooner we establish communication between parents and infants, the greater the attachment and less frustration parents may experience" (Hotelling, 2004, p. 44). When the perinatal educator identifies a parent's *own child's* behavior and demonstrates helpful techniques for *that individual child*, learning may be optimized. The use of visual aids, such as The HUG educational DVD and handout, and the provision of information about newborn behavior by a variety of professionals along the conception-to-raising-a-child continuum will be especially beneficial to new parents (Gardner & Deatrick, 2006). Informed by research on effective rhetorical and communication techniques (Atkinson, 2004; Ehninger et al., 1980), The HUG program uses language that is both family-friendly and memorable.

To date, well-established components for effective intervention have been systematically incorporated into The HUG's design (Brazelton, 1992, 1999; Gardner & Deatrick, 2006; Mercer & Walker, 2006; Nugent, 1985; Sanders & Buckner, 2006). The

TABLE
Nurses' Knowledge About and Experience Sharing Newborn Behavior With Parents*

Participants' Response**	Before Test % of Optimal Knowledge and Ability ($N = 107$)	After Test % of Optimal Knowledge and Ability ($N = 107$)	% Improvement ($N = 107$)
I have knowledge about a newborn's two sleep cycles.	56%	96%	40%
I can describe a newborn's ability to self-comfort.	63%	94%	31%
I can show parents how to get a newborn to the best state for eating.	59%	93%	34%
I have knowledge about how a newborn's body changes in response to overstimulation.	66%	96%	30%
I can identify what comforting measures work best for a baby.	68%	92%	24%
I understand gaze aversion and can explain its importance to parents.	54%	95%	41%
I can help a newborn orient to a face, a voice, and/or a toy.	61%	90%	29%
I enjoy giving parents information about newborn behavior.	88%	91%	3%

*Source: Tedder, J. (2007). *Nurses' knowledge and experience sharing newborn behavior with parents.* Unpublished manuscript.
**Participants responded to questions using a 5-point Likert scale, with 5 being the optimal knowledge and ability rating.

Table summarizes results of an unpublished pre- and post-testing of 107 nurses and childbirth educators who attended The HUG training (Tedder, 2007). According to the study, ''The HUG class gave nurse midwife students a new perspective on how to help parents understand and interact with their babies. 'I will never think the same way about babies again!' one explains.'' Further research is being undertaken to ascertain the specific short- and long-term benefits of The HUG program to parents as well as the challenges professionals face in integrating these concepts into a practice. In the hands of a dedicated perinatal educator, The HUG program can help parents begin the adventure of parenthood with increased confidence, knowledge, and passion for their new baby.

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