

# Love, Pain, and Intensive Care

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No activity can give you the joy that service does. . . .  
You should yearn for the chance to console, comfort,  
encourage, heal. See yourself as another, feel his joy to  
be yours, his sorrow to be yours.

—Sri Sathya Sai Baba<sup>1</sup>

**T**HE drive for objective assessments and measurements in recent years has overshadowed some of the subjective aspects of medical care. Whereas evidence-based medicine informs “what” we can do for our patients, “how” we are providing this care may be equally important. This includes not only the actual details of care delivery but also the attitude, feelings, and emotional state of professional caregivers at the time of patient interactions. Interventions performed without empathy, mechanically, or while distracted by other concerns may be less effective than those imbued with love and care for the patient’s well-being.<sup>2</sup> Although we explore in this commentary the evidence for this principle related to neonates receiving care in an NICU, the same principle can be applied to other clinical populations and practice settings, especially intensive care.

During training, practitioners are encouraged to maintain objectivity and suppress their emotive reactions or emotional involvement in all clinical situations. Lack of objectivity is often cited as a reason for not treating close relatives, when emotional involvement is expected to occur. This habitual suppression of emotive behavior becomes second nature during the long years of clinical practice and is often seen as a component of professional competence and efficiency. Often, “cold, clinical, matter-of-fact” behaviors are modeled as symbols of professionalism,<sup>3</sup> whereas love, compassion, or empathy may signify weaknesses or lack of professionalism.<sup>4</sup> The current importance of hard facts, tough choices, and evidence-based practice, coupled with the need for peer acceptance and greater specialization, seem to have subjugated empathy as the most important component of medical practice.<sup>5</sup> Even formal courses in humanism and bioethics, started in various medical schools across the country, have not reversed a growing public perception that medical professionals do not manifest a “healing presence” among their patients.<sup>6–9</sup> Intensive care, in particular, has effectively excluded parents from the healing process through the use of large, impersonal multipatient rooms devoted to more efficient use of nursing time but completely lacking in privacy or personal communication.

Is there any evidence that elements of love in bedside neonatal care can alter the clinical outcomes of critically

ill neonates? Several approaches have evolved in NICU care that require mindfulness and focused attention of clinicians who care for medically fragile newborns. Pre-term neonates who received tactile-kinesthetic stimulation showed improved growth and development,<sup>10–12</sup> which may have been associated with increases<sup>10</sup> or decreases<sup>13</sup> in stress hormones. However, the beneficial effects of tactile-kinesthetic stimulation occurred only if nurses performed the intervention with focused attention on the infant (ref 14; T. Field, PhD, personal verbal communication, January 30, 1997), a result that was also later suggested by holistic medical theory.<sup>5</sup>

Maternal separation has become commonplace in modern NICUs despite mounting evidence of its detrimental effects in term newborns.<sup>15</sup> Late preterm (or “near-term”) newborns are a vulnerable population with an increased risk of mortality and morbidity.<sup>16</sup> Infants in this group are also whisked away by well-meaning caregivers just after birth because of legitimate concerns over physiologic stability, although research has clearly shown beneficial effects of early skin-to-skin contact for this population.<sup>17</sup> The effects of maternal skin-to-skin contact on neonatal outcomes include improved weight gain, greater physiologic stability,<sup>17–19</sup> and reduced responses to acute pain.<sup>20,21</sup> Other aspects of maternal care also decrease the pain and stress during neonatal care. Maternal rocking reduces neonatal distress,<sup>22</sup> whereas mechanically induced rocking has no effects.<sup>23,24</sup> Breastfeeding also reduces the physiologic and behavioral responses to acute pain and stress in neonates and is recommended as the first line of treatment.<sup>25,26</sup> Regardless of whether we study the effects of skin-to-skin contact, breastfeeding, rocking, soothing vocalizations, oral breast milk, or other components of maternal behavior, all of these are expressions of a mother’s love for her infant.

However, if the nursing or physician staff provided such emotional inputs, would it have similar effects? The Neonatal Individualized Developmental Care and Assessment Program (NIDCAP), for example, systemati-

**Abbreviation:** NIDCAP, Neonatal Individualized Developmental Care and Assessment Program

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cally changes a protocol-based model of nursing care to a relationship-based approach.<sup>27–29</sup> A significant body of empirical evidence supports the efficacy of NIDCAP in improving the clinical and neurobehavioral outcomes of preterm neonates, both at hospital discharge<sup>28–32</sup> and follow-up during childhood.<sup>33–35</sup> Integral to this approach are the focused human attention and sincere commitments to understanding and supporting the developmental goals of the preterm infant,<sup>36–38</sup> applied within the context of family-centered care.<sup>39,40</sup>

Yet another approach involves multisensory stimulation of preterm neonates who are undergoing painful procedures. Sensorial saturation, an approach that includes gentle massage, soothing vocalizations, making eye contact, smelling a perfume, and sucking a pacifier (with or without sucrose therapy), has potent analgesic and calming effects on neonates in acute pain.<sup>41–43</sup> This approach, similar to the NIDCAP interventions noted above, involves focused human attention and sincere commitment to the infant's comfort. In doing so, it expresses empathy for infants who are undergoing painful experiences during NICU care.

The effects of empathy and love may extend well beyond the neonatal period. Painful experiences as a preterm infant predict changes in stress regulation, pain processing, attention, and cognition during infancy and childhood.<sup>44–50</sup> Infants exposed to repeated pain/stress may not sufficiently build up brain circuits or develop strategies for coping with stress. Emerging brain circuits that specifically connect areas in the prefrontal lobe with the limbic system are essential for stress management throughout life.<sup>51</sup> These mechanisms for stress management are gender specific, even in infancy.<sup>52,53</sup> Thus, insensitive and nonindividualized care may expose infants to repeated stress that is severe enough to require additional sedation or adversely affect brain development.

Humans have a natural tendency for empathy, possibly ingrained through evolution,<sup>54</sup> but it can be suppressed through learning and development. Well-meaning clinicians may intuitively want to take control from birth to maintain physiologic stability. Contrary to attitudes during training or habitual ways of thinking, current evidence suggests that NICU clinicians should consider how they care for their patients. Only by incorporating empathy and love in caring for their patients will they maximize the benefits of evidence-based medicine. Like secure mothers, we can be sensitive to infants' needs and respond to them promptly and adequately.<sup>55</sup> Neonatal care imbued with elements of love will not only ensure the success of the Infant Friendly Hospital and Humane Neonatal Care initiatives<sup>56</sup> but also improve clinical outcomes and provider satisfaction, provide the impetus for continuous quality improvement, and improve morale in the NICU.

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