

The First Fragile Infant Forum for Integration of Standards: Implementing the Eating, Feeding, and Nutritional Delivery Standards of Infant and Family Centered Care

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The First Fragile Infant Forum for Integration of Standards (FIFIS) will provide an opportunity for interprofessional leaders, staff, and parents to discuss and plan the implementation of the feeding, eating, and nutrition delivery standards, one area of infant and family-centered developmental care in intensive care units (<https://nicudesign.nd.edu/nicu-care-standards/>). The Gravens Conference on “The Physical and Developmental Environments of Care” sponsors the work of the Consensus Committee on Infant and Family-Centered Developmental Care (IFCDC), which published the evidence-based *Report of the First Consensus Conference on Standards, Competencies and Best Practices for Infant and Family-Centered Developmental Care in the Intensive Care Unit* in 2020. (1) The committee comprises an interprofessional group of leaders, neonatal nurses and medicine, therapies, perinatal social workers, infant mental health specialists, psychologists, and parents committed to improving services for infants and families within intensive care settings.

Evidence-based standards of care for IFCDC in intensive care

Developmental care is essential to the medical plan of care; it integrates the emotional, relational, and sensory support essential to the baby’s physical, social, and cognitive development. The conceptual model for IFCDC includes the essential elements of care that include a) family involvement, b) neuroprotection of the developing brain, c) environmental protection, d) individualized

care, e) infant mental health, f) collaboration with the infant who is considered as a competent communicator and interactor, and g) systems’ thinking for implementation. Using the essential elements, the committee developed evidence-based standards and competencies for key areas such as sleep and arousal, skin-to-skin contact, feeding and nutrition, touch and positioning, infant and family pain and stress management, and organizational systems. The consensus panel has invited public comment and revision and professional input. The standards and guidelines provide credible, quality practice-to-outcome evidence.

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Evidence-based standards for feeding, eating, and nutrition delivery:

The IFCDC Feeding Standards state that feeding experiences in the intensive care unit (ICU) shall be behavior-based and baby-led. It is important to note that baby-led principles are similar whether applied to enteral, breast-, or bottle-feeding experiences. Every mother shall be encouraged and supported to breastfeed and/or provide human milk for her baby. Nutrition shall be optimized during the ICU period by measuring and monitoring growth and fortifying the human milk as needed to meet full nutritional needs. Mothers must be supported to be the primary feeders of their baby. Mother = describes the dyad and signifies the baby as an active interactor in the nurturing relationship with the mother (biologic or other) and with the interactive and integrated influence of the father/partner/significant other. Family members reinforce and enhance the supportive relationship. Feeding management shall focus on establishing safe oral feedings that are comfortable and enjoyable. Further, caregiving activities shall consider the baby’s response to input, especially around the face/mouth, and aversive non-critical care oral experiences shall be minimized. Professional staff shall consider smell and taste experiences that are biologically expected. Support for the baby’s self-regulation shall be encouraged, primarily related to sucking for support. Environments shall support an attuned feeding for both the feeder and the baby to minimize distractions and enhance comfort measures. ICUs shall include interprofessional perspectives to provide the best feeding management for the individual baby and parent dyad. Additionally, feeding management shall consider short and long-term growth and feeding outcomes. (<https://nicudesign>.

The rationale for the implementation of the feeding, eating, and Nutrition delivery standards:

Too often, healthcare providers prescribe how and when the baby should be managed and fed—the recipe of clinical guidelines. The joy to an infant of eating and feeding is lost to a task that must be completed. Feeding is often the focus of the last weeks of hospitalization and is seen as a “barrier” to discharge. (2) Infants must achieve the earlier milestones that support eating before successfully integrating the skills to eat. Like every other developmental milestone, infants do not reach full oral feedings at the same time or age. Milestones are achieved within windows of time; the average age of achieving full oral feedings is consistently reported as approximately 36 ½ weeks, plus or minus two weeks. (3, 4) This is despite interventions that have focused on speeding this process. The IFCDC standards recognize that the process of eating and feeding should be natural, determined by the biophysiological and neurodevelopmental ability of the baby. Based on the baby’s gestation, behavior, and communication, professional caregivers and families identify the capability and message of the baby and support the neurodevelopment of eating. It is essential to assist the m/other and father/partner in interpreting the behavior and communication of the baby and to feed the baby throughout the ICU experience, all the while becoming a confident nurturing caregiver. Feeding is the most complex skill required of an infant and therefore is often the last milestone achieved before discharge; eating continues to develop well after discharge. Parents also identify feeding as a primary concern as they transition to home. (5, 6, 7) And the evidence is mounting that focusing on the quality of the feeding experience does not increase the length of stay nor delay the achievement of full oral feedings. (8, 9) This evidence is a foundation for the standards and competencies.

“It is essential that nutritional management and feeding are individualized to the baby and planned collaboratively among health professionals and the m/other and parent/partner. Consistency in caregiving is important to the regulation of the baby and is best provided by the m/other and parent/partner.”

It is essential that nutritional management and feeding are individualized to the baby and planned collaboratively among health professionals and the m/other and parent/partner. Consistency in caregiving is important to the regulation of the baby and is best provided by the m/other and parent/partner. The intensive care period sets a foundation for developing healthy nutrition and eating habits; feeding management and plans need to consider short- and long-term outcomes. Health professionals can partner with parents to share education, clinical guidance and encouragement, and decision-making to support the baby’s individualized care and strengthen the parents’ confidence and competence.

Implementing the evidenced-based feeding standards requires a

collaborative process among health professionals and parents, using systems’ thinking to plan, prioritize, integrate, evaluate, and sustain change. Professional caregivers can assess the current feeding practice within the intensive care unit and evaluate the metrics such as individual baby growth and nutrition, parent caregiving, parent competence and/or confidence with feeding experiences, and staff performance. They can also consider the long-term outcomes of infants who are discharged from the intensive care setting eating reflexively but transitioning to volitional eating around two months post-term. Research shows that approximately 40% of infants who appear to eat “well” during the hospitalized time period have feeding and/or nutrition problems after discharge. (10, 11) It is not enough to get an infant to eat and go home; the goal should support long-term enjoyment of eating and feeding. The IFDSC standards identify gaps between current practice and the standards and current outcome metrics compared with standardized expectations. These gaps can assist in designing strategic initiatives to improve practice and metrics. The standards also engage and educate providers, caregivers, and parents on the evidence, competencies, and expected outcome of the change initiative. Intensive care settings should also measure and evaluate outcomes and adjust strategies. These standards and competencies provide a guideline for establishing infant and family-focused outcomes. The goal is to incorporate the change initiative through the unit staff and parents using system’s thinking. Finally, the IFCDC standards and competency’s goal is to support units to monitor and adjust the initiative to sustain practice continually. (12,13)

“We hope you will join the IFCDC Consensus Committee members at the FIFI S on July 13 to 15, 2022, to understand the standards and competencies more fully and work with colleagues to develop a system thinking, evidence-based feeding implementation plan in your ICU.”

Join us at the first Forum for Implementation of Standards:

We hope you will join the IFCDC Consensus Committee members at the FIFI S on July 13 to 15, 2022, to understand the standards and competencies more fully and work with colleagues to develop a system thinking, evidence-based feeding implementation plan in your ICU. You will enjoy the opportunity to interact with like-minded health professionals and become an influencer of practice change in your unit.

References:

1. Browne, J. V., C. B. Jaeger, C. Kenner, *Infant Gravens Consensus Committee on, and Care Family Centered Developmental*. 2020. ‘Executive summary: standards, competencies, and recommended best practices for infant- and family-centered developmental care in the intensive care unit,’ *J Perinatol*, 40: 5-10.
2. Edwards, L., C. M. Cotten, P. B. Smith, R. Goldberg, S. Saha, A. Das, A. R. Laptook, B. J. Stoll, E. F. Bell, W. A. Carlo, C. T. D’Angio, S. B. DeMauro, P. J. Sanchez, S. Shankaran,

- K. P. Van Meurs, B. R. Vohr, M. C. Walsh, W. F. Malcolm, Health Eunice Kennedy Shriver National Institute of Child, and Development Human. 2019. 'Inadequate oral feeding as a barrier to discharge in moderately preterm infants,' *J Perinatol*, 39: 1219-28.
3. Brun, G., C. J. Fischer Fumeaux, E. Giannoni, and M. Bickle Graz. 2020. 'Factors associated with postmenstrual age at full oral feeding in very preterm infants,' *PLoS One*, 15: e0241769.
 4. Van Nostrand, S. M., L. N. Bennett, V. J. Coraglio, R. Guo, and J. K. Muraskas. 2015. 'Factors influencing independent oral feeding in preterm infants,' *J Neonatal Perinatal Med*, 8: 15-21.
 5. Aloysius, Annie, Maryam Kharusi, Robyn Winter, Karen Platonos, Jayanta Banerjee, and Aniko Deierl. 2018. 'Support for families beyond discharge from the NICU,' *Journal of Neonatal Nursing*, 24: 55-60.
 6. Purdy, I. B., J. W. Craig, and P. Zeanah. 2015. 'NICU discharge planning and beyond: recommendations for parent psychosocial support,' *J Perinatol*, 35 Suppl 1: S24-8.
 7. Mosher, S. L. 2017. 'Comprehensive NICU Parental Education: Beyond Baby Basics,' *Neonatal Netw*, 36: 18-25.
 8. Horner, S., A. M. Simonelli, H. Schmidt, K. Cichowski, M. Hancko, G. Zhang, and E. S. Ross. 2014. 'Setting the Stage for Successful Oral Feeding: The Impact of Implementing the SOFFI Feeding Program With Medically Fragile NICU Infants,' *J Perinat Neonatal Nurs*, 28: 59-68.
 9. Gentle, S. J., C. Meads, S. Ganus, E. Barnette, K. Munkus, W. A. Carlo, and A. A. Salas. 2022. 'Improving Time to Independent Oral Feeding to Expedite Hospital Discharge in Preterm Infants,' *Pediatrics*, 149.
 10. Robinson, L., L. Heng, and S. Fucile. 2022. 'Investigating the Developmental Trajectory of Long-term Oral Feeding Problems in 'Healthy' Preterm Infants,' *Dev Neurorehabil*: 1-5.
 11. Pados, B. F., R. R. Hill, J. T. Yamasaki, J. S. Litt, and C. S. Lee. 2021. 'Prevalence of problematic feeding in young children born prematurely: a meta-analysis,' *BMC Pediatr*, 21: 110.
 12. Consensus Committee on Infant and Family Centered Developmental Care. Report of the First Consensus Conference on Standards, Competencies and Best Practices for Infant and Family Centered Developmental Care in the Intensive Care Unit. 2020. <https://nicudesign.nd.edu/nicu-care-standards/>
 13. Ross E, Arvedson J and McGrath J. Recommendations for Best Practices for Feeding Eating and Nutrition Delivery, in Report of the First Consensus Conference on Standards, Competencies and Best Practices for Infant and Family Centered Developmental Care in the Intensive Care Unit. 2020. <https://nicudesign.nd.edu/nicu-care-standards/>

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