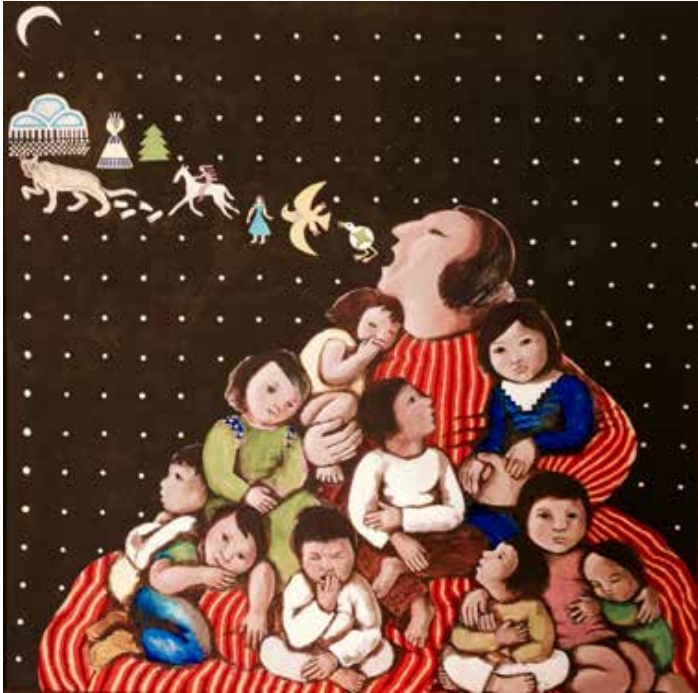


# White Paper Executive Summary for the First Fragile Infant Forum for Integration of Standards (FIFI-S): Feeding, Eating, and Nutrition Delivery based on the Recommended Standards, Competencies, and Best Practices for Infant and Family-Centered Developmental Care in Intensive Care Monrovia, CA July 13-15, 2022

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***“As the field of Infant and Family-Centered Developmental Care (IFCDC) has advanced, its principles have become integrated into current intensive care policies and procedures. In parallel, research has emerged to support a variety of practices to modify the caregiving environments for babies and their families in intensive care.”***

## **Overview of the FIFI-S White Paper Origins and Process:**

As the field of Infant and Family-Centered Developmental Care (IFCDC) has advanced, its principles have become integrated

into current intensive care policies and procedures. In parallel, research has emerged to support a variety of practices to modify the caregiving environments for babies and their families in intensive care. The evidence is strong enough for a Gravens inter-professional panel of leaders to converge and identify significant constructs represented in IFCDC and to gather evidence to support practice. However, once evidence is identified, implementation strategies in a systematic approach need to be articulated and disseminated. As they continue to accumulate evidence and further articulate standards, competencies, and best practices in intensive care, the Gravens IFCDC consensus panel has identified a need to disseminate information about implementing the standards.

As a result, a series of Fragile Infant Forums for the Implementation of Standards (FIFI-S) has been initiated to assist intensive care professionals in understanding the evidence available for IFCDC practice and knowing how to successfully integrate the standards into intensive care and hospital systems. Without systems integration, IFCDC practices and adherence to the standards cannot be successfully accomplished.

***“The 2-day conference allowed participants to engage in dialog about how systems impact interventions at the bedside for the emphasis of this forum--feeding practices.”***

In July 2022, the FIFI-S hybrid conference provided an opportunity for interprofessional leaders, providers, caregivers, parents, and educators to focus on the Feeding Eating and Nutrition Delivery domain (FEND), and to learn, discuss, and plan implementation strategies. The 2-day conference allowed participants to engage in dialog about how systems impact interventions at the bedside for the emphasis of this forum--feeding practices. Evidence was reviewed, gaps in knowledge were identified, and there was an ensuing discussion of strategies for examining how best practices can be implemented. Using evidence-based continuous quality improvement (CQI) tools and change theory, implementation science helped participants outline how standards could be implemented in the Intensive Care Unit (ICU).

## **Implementation Science used to Integrate IFCDC Into Practice.**

Implementation science uses methods to systematically integrate research and experiential clinical evidence to improve the quality

and effectiveness of health practice. To implement and operationalize the evidence, integration using systems thinking is essential.

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**Systems thinking** is an approach to guide the successful identification of the parts of the system, their relationship to each other, and the implication of change to one or more parts of the system. Systems thinking is used to assess the components/parts of a whole, a human or an organizational system, and how they relate to each other to make the system function as intended.

**Continuous Improvement as a Systems Thinking Approach** uses systems thinking to guide assessment, planning, implementation, and evaluation. Systems thinking uses evidence and continuous improvement to address the advancement of healthcare, the rapid evolution of technology, and changing needs of babies, parents, and families. Essential tools of the Continuous Quality Improvement Process (CQI) include assessment of where and how to begin and measurement and metrics.

*Gap analysis* helps to determine if there is a difference between the current practice and how it can be improved. Sometimes a gap analysis includes an evaluation or measurement of post-discharge activity to fully understand the evidence-based change that needs to be made to caregiving while the baby is in the ICU.

Implementation of systematic *measurement and metrics* also are essential for continuous improvement. There are many ways to present data. Selection of the method that makes the most sense for the project, the organization, and the unit, including tools to display, monitor, and analyze measures and metrics.

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**Exemplars** of professionals who utilized the CQI process for FEND standards systems implementation provided a discussion of the strengths and challenges of the gap analysis process. Exemplars included a presentation from D Paul, OTR/L, the Children’s Hospital Colorado, Aurora, on the implementation of a feeding policy, and a study by S Horner, et al., who identified adverse feeding behaviors exhibited by babies 3-5 months post-discharge as reported by parent feeders.

#### **Process and Tools for Implementation of FEND Standards:**

The forum faculty used step-by-step guidance to implement IF-CDC standards for FEND using Continuous Quality Improvement (CQI), Operational Business Plans, Motivational Strategies for the Health Care Team, and Strategies to Measure Progress.

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The following process was then used by FIFI-S participants to allow for working through the systems thinking process related to FEND standard implementation. FIFI-S workgroups, guided by faculty, used implementation science tools for the initial identification of issues to be addressed, beginning implementation planning and the process of implementation.

Note: Examples of the workgroup process are detailed in the White Paper, and implementation tools are found in the White Paper Appendices.

#### **Workgroup identification of gaps and/or FEND issues to be addressed using two evidence-based models:**

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***“Workgroups used the Logic and/or the Fishbone Model approach to implement IFCDC Standards, Competencies, and Best Practices in Intensive Care Management of FEND of the newborn found at the website: <https://nicudesign.nd.edu/nicu-care-standards/>”***

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Workgroups used the *Logic and/or the Fishbone Model* approach to implement IFCDC Standards, Competencies, and Best Practices in Intensive Care Management of FEND of the newborn found at the website: <https://nicudesign.nd.edu/nicu-care-standards/>.

*The Logic Model* utilizes a graphic illustration of how a program or intervention is expected to produce desired outcomes. The *Logic Model* is beneficial to better understand situations in complex and dynamic systems to highlight systems interactions/change, clarify aims and gaps, guide the development of measures, and track the progress of the intervention and changing needs. Because it provides a “big picture” overview, it must be combined with other tools to detail the steps and stages of the intervention and encour-

age creative thinking in change initiatives. (1)

*The Fishbone Diagram* determines the relationship between the cause and effect of the problem/situation. It can be used to determine possible causes and causal relationships of a problem or when a team's thinking tends to fall into ruts. (2,3) The diagram can be used when challenges, obstacles, or barriers hamper the progress of a change initiative.

#### **Workgroup planning for implementation of FEND Standards using the PDSA and Key Driver approaches at the FIFI-S forum:**

The *Plan-Do-Study-Act (PDSA) Rapid Cycle of Improvement* approach shows how to change an idea into action. It helps define the cycle(s)/initiative(s) of the change needed for implementation.

A *Key Driver diagram* shows the relationship between the project's overall aim, the primary drivers/key drivers that contribute to achieving the objective, the secondary drivers that are parts of the primary drivers, and change ideas to test for each secondary driver. It helps to visualize what drives the achievement of the aim/objective – steps, sequence, new knowledge, skills - needed to make a difference/change, as well as to know if the endpoint has been reached. (4)

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#### **Systems Implementation Strategies of the FEND Standards:**

##### **Execution, Monitoring, and Maintenance:**

Throughout the implementation phase, caregivers and parents monitor the process, communicate openly, and share innovations with the team to maintain consistency of practice. The roll-out of each change idea/initiative can be managed using continuous improvement process tools. Consistent use of these tools helps to ensure that caregivers stay motivated.

##### **Workgroups focused on the following strategies using continuous improvement strategies:**

*Monitoring the Implementation* – Continuous monitoring is critical to know if the change has been implemented to achieve the desired outcome.

*Maintenance* – Although challenging, change must be maintained in any change process. When the change initiative is complete, the measures/metrics are documented, and the outcome evaluated, consider the spread of the initiative to the larger population of babies, like-ICUs, out-patient services, community outreach services

##### **Evaluating and monitoring of FEND standards systems im-**

##### **plementation:**

*Lessons Learned* – There are always lessons learned from an experience. Asking what has been learned through the change process(s) and monitoring the data is helpful.

*Playbook/Storybook* – The development of a playbook/storybook records the products and process of the CQI improvement and subsequent improvements over time. (3)

*Dissemination and Publication* – Dissemination of the process and findings of the CQI initiative to share the experience and data with comparable systems constitutes a component of the evaluation.

*Sustainment* – Sustain the practice long term by continuously monitoring the education, competency, collaboration, and outcome(s). As science evolves, sustaining improvement and continuing to improve over time can be challenging, though it is paramount.

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***“As a summary of the FIFI-S initial forum, the White Paper describes how like-minded neonatal interprofessionals can engage in collaborative work using evidence-based implementation science strategies.”***

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#### **FIFI-S White Paper Executive Summary—Final Words**

The first FIFI-S Forum White Paper has summarized evidence-based approaches that apply implementation science strategies for integrating IFCDC standards related to feeding, eating, and nutrition delivery. As a summary of the FIFI-S initial forum, the White Paper describes how like-minded neonatal interprofessionals can engage in collaborative work using evidence-based implementation science strategies. The White Paper describes strategies and tools for developing initiatives for the successful and ongoing implementation of IFCDC standards. It also provides guidance with specific process examples for interprofessionals committed to implementing evidence-based IFCDC standards, competencies, and best practices in intensive care.

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