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EDITORIAL

Programs and strategies for implementing development- and family-centered care in neonatology

Programas y estrategias para la implementación de los cuidados centrados en el desarrollo y la familia en neonatología

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Preterm birth is a recognized cause of childhood morbidity and mortality. According to data from the World Health Organization, it is the leading cause of death among children under 5 years of age and one of the main determinants of short- and long-term health problems in childhood. Despite medical interventions and technological advances, preterm birth continues to be associated with a significant risk of neonatal morbidity and neurodevelopmental disorders.

Some of this morbidity is attributed to deleterious early sensory experiences during a particularly critical period. The environment of neonatal intensive care units exposes preterm infants to stimuli that are harmful or overwhelming for their sensory regulation abilities. Furthermore, separating the infant from the parents hinders early bonding and increases stress and distress for both the baby and the family.

As stated in the fourth of the Ten Rules for the Care of Preterm Infants of the Sociedad Española de Neonatología (SENeo, Spanish Society of Neonatology), infant- and family-centered developmental care (IFCDC) is one of cornerstones for their management. The question, therefore, is no longer whether or not to adopt the IFCDC model, but how to implement it.

In recent decades, various IFCDC programs and strategies have emerged. These approaches share the goal of adapting the hospital environment and promoting family-centered care by providing 24-h access to neonatal units and encouraging parents to be involved in the care of their hospitalized children.[1] Although all of them share a common goal—to improve the short- and long-term developmental outcomes and wellbeing of preterm infants—they differ in their structure, implementation, and the type of support offered to

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families. Furthermore, not all of them are comprehensive models, as some are rather implemented as complementary strategies within broader programs.

The most relevant programs in this regard are[2]:

Close Collaboration with Parents, in Finland, which is partly based on observing the behavior of the infant, with emphasis on active engagement of the family in daily infant care and shared clinical decision-making.

Family Integrated Care (FiCare), which started in Toronto, mainly focuses on the close collaboration of health care professionals and families, promoting the integration of parents as the primary caregivers and effective communication to facilitate their participation in decision-making.

The *Supporting and Enhancing NICU Sensory Experiences* (SENSE) program, developed in the United States in 2017 with the objective of helping families provide positive sensory experiences appropriate for the postmenstrual age of the infant during the stay in the neonatal intensive care unit.

Family Nurture Intervention (FNI) promotes the early emotional connection of the mother- infant dyad in order to improve maternal emotional wellbeing and promote the infant's neurodevelopment.

Newborn behavioral observation (NBO) is a brief intervention designed to help parents understand their infant's competencies, challenges and individuality. Through shared observation of neonatal behavior as a form of communication, NBO helps strengthen the early bond and promote the well-being of both the newborn and the family.

The *Newborn Individualized Developmental Care and Assessment Program* (NIDCAP),[3] which started in the United States in the 1980s under the leadership of Dr Heidelise Als, is the program with the longest trajectory, strongest evidence and more widespread application in hospitals worldwide, although it is also one of the most complex to implement. It is based on the synactive theory of development, which conceives the newborn infant as being in constant interaction with the environment, and provides a structured framework for professionals to observe and interpret the behavior of the infant and provide an individualized response to it. Its implementation has brought on a profound shift in the approach to neonatal care, although it requires considerable time and resources. In this context, the *Family and Infant Neurodevelopmental Education (FINE)*,[4] which shares the theoretical underpinnings of NIDCAP, was developed as a more accessible and practical program with a stepwise implementation, which allows training a larger number of professionals in less time while facilitating a progressive approach to the implementation of IFCDC principles. In addition, FINE can serve as a stepping stone toward NIDCAP for professionals seeking more specialized training. It is for these reasons that we, the professionals at the participating centers, have chosen this model, and we believe that, over the years, it has greatly contributed to our daily practice.

All existing care programs or strategies require prior specific training of professionals, and the duration and complexity of the training vary depending on the model. Their correct implementation involves not only a training period but also their gradual integration into routine clinical practice and, in many cases, organizational and cultural changes within neonatal care services.

In Spain, to our knowledge, there are currently two programs in operation: FiCare, at the Hospital La Paz, and NIDCAP, which is implemented at the Hospital 12 de Octubre in Madrid, the Sant Joan de Déu and Vall d'Hebron hospitals in Barcelona, and the Doctor Josep Trueta Hospital in Girona. In addition, the NIDCAP program is being gradually introduced in the remaining the hospitals affiliated to the Institut Català de la Salut.

Several hospitals are already undergoing this transition through the FINE training program, including the hospitals of Getafe, Malaga, Reina Sofía (Córdoba), Donosti and Son Espases (Mallorca), and numerous professionals (doctors as well as nurses) have enrolled in the courses offered by the training centers in recent years.

The great advantage of the NIDCAP-FINE program is that it provides a training pathway for professionals from different fields, who, together, drive the transformation of the units.

One way to implement certain components of the NIDCAP-FINE methodology is to adopt strategies focused on family involvement. Some examples include the ''Cuídame'' (''Care for me'', Hospital 12 de Octubre), ''Amb tu'' (''With you'', Hospital Sant Joan de Déu), and ''INFA-Neo'' (Josep Trueta Hospital) programs.

Despite these advances, the implementation of IFCDC in Spain still faces challenges, such as the variation between units, the need for ongoing training of professionals, and the adaptation of traditional hospital care settings required to implement models that fully integrate families.

Still, the trend is clear: an increasing number of units are adopting evidence-based approaches that recognize the family as an integral part of the care process, and programs such as NIDCAP-FINE and FiCare are setting standards for more effective, safe, and humane neonatal care.

Therefore, we believe that the application of IFCDC in neonatal units through one of the different care programs and strategies currently available is key for achieving excellence in neonatal care, in line with European standards.[5]

NIDCAP training centers in Spain: Hospital Universitario 12 de Octubre Centro de Formación NIDCAP; Centro de Formación NIDCAP of Barcelona and Girona: Vall d'Hebron and Doctor Josep Trueta hospitals; Centro de Formación NIDCAP Sant Joan de Déu Barcelona.

Declaration of competing interest

The authors have no conflicts of interest to declare.

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