In quest of a healthcare model for normal, low risk newborn infants

The care provided to newborn infants and their families is an evolving process. We know what it used to be and what it is now, but we are uncertain of what it will be in the future.

Changes arise from the desire to provide the best comprehensive care in relation to birth and early infant care. Based on this, however, we have also made, and are making, mistakes.

When births took place as a family event in the privacy of the home and attended by midwives, there was no chance to deal with complications in a timely and adequate fashion. This situation fluctuated between the benefits of family support and the risks of maternal and neonatal morbidity and mortality.

In Argentina, institutionalization of birth to reduce morbidity and mortality started in mid-20th century. Pregnant women first, and then postpartum women and newborn infants, became our "patients", and were isolated from their family, and healthcare providers started playing a leading role throughout their stay at the maternity center.

Contemporary to this model, neonatology emerged as a specialty as a branch of pediatrics, dealing specifically with the care of moderate risk newborn infants and preterm infants with an adequate birth weight who required special care.

Technical and scientific capacity to provide tertiary care increased progressively. With the polio epidemics in Copenhagen in 1952, critically-ill patients and mechanical ventilation became the focus of attention. Pediatric intensive care units and neonatal intensive care units (NICUs) came next. Professionals in charge of these units were pediatricians with some knowledge on physiology and perinatal conditions. In the early 1960s, neonatology was recognized as a specialty. In 1955, Dr. W. Silverman published the first randomized study on neonatal medicine.

This is the current existing model of care: maternity units with rooming-in care for healthy newborn infants, a NICU, and outpatient sectors for the follow-up of preterm infants and high-risk newborn infants. But this structure is undergoing changes.

First of all, there was a change of mind. The leading role played by healthcare providers to the detriment of the family had a negative emotional impact on mothers. Isolated from their family, their anxiety and depression, dystocias and operative deliveries increased. Separated from their newborn infants (taken care at the Nursery), breastfeeding initiation was delayed due to the poor interaction necessary for feeding on demand, the administration of formulae and strict schedules. Families had no chance to get to know the baby and learn the basics of infant care.

In 1948, Dr. Edith Jackson implemented the first Rooming-in Unit at the Grace-New Haven Community Hospital. Pregnant women could choose between this system or the traditional nursery care. It was an excellent experience for families and physicians in training programs,[1, 2] practice that later became widely disseminated.

At the NICU, visits from parents to newborn infants were strictly restricted, and parents received scarce information and did not play an active role in care. Following extended periods of hospitalization in tertiary care units, preterm infants were "returned" to inexperienced families in their management and were sometimes even barely attached to their babies. Rehospitalization for malnutrition or abandonment was common.

The response to this situation was a movement called Safe and Family-Centered Maternity Hospitals. This strategy is based on the presence of supportive people during labor and birth, delaying routine procedures in favor of the reunion of the newborn infant with his/her parents, free access of parents to the NICU, parental participation in care, keeping her baby with her at all times (rooming-in), promotion of exclusive breastfeeding, and teaching the basics of infant care and healthcare at the maternity center.

This model may be improved as its vulnerable points are detected, usually in relation to human resources. Its adequate functioning will depend on the quality and quantity of medical and nursing staff.

Some newborn infants are clearly healthy, others require intensive care, but there is an intermediate group, a grey area in neonatology, of newborn infants who can stay in the same room together with their mothers or at the NICU, depending on training and resources of the health team.

Benefits of rooming-in can be extended to newborn infants who require minimum special care provided medical and nursing monitoring is warranted to detect the timely moment when they require to be transferred to the NICU.

Preterm infants born at 35-36 weeks of gestation, infants with a birth weight between 2000 g and 2500 g or with a congenital heart disease without hemodynamic compromise, or

those with respiratory distress without oxygen requirements in the first 12 hours of life, genetic syndromes without major malformations, a high birth weight due to maternal diabetes, Rh incompatibility, a malformation that does not require immediate care, and any other infant with similar conditions may be candidates for rooming-in.

Let us focus on nursing. The traditional model includes a nurse to look after the postpartum woman and a second nurse for the newborn infant, but it presents some difficulties. Mothers tend to discuss their concerns with the first health care provider that shows up. Receiving contradictory messages from the adult care provider and neonatal staff members causes confusion and anxiety. If they all spoke the same language, they would have twice the chance of providing health information and education.

This is achieved through the mother-child binomial management model. It involves professional nurses trained to provide perinatal care to mother and child. Such training may be conducted at courses at the time of employment initiation, with regular updates and reinforcements on a daily basis.

It is critical for physicians to work in team with nurses, helping with their training and especially bringing relevance to their role. Trained nurses make up the essential basis of neonatal care through disease control and detection and an effective communication with physicians.

The other problem are physicians. Neonatology as a specialty has undergone remarkable changes in few years. It started as a novelty, it developed quickly and now appears to be declining. This topic was discussed a few years ago.[3] It would take long to explain the reasons why this is occurring (intensive care stress, health system, etc.), but neonatologists are becoming scarce.[4]

Some departments have trouble filling shifts at the NICUs. So what is left for normal newborn infant care? The intense dynamics of neonatal management is more appealing than rooming-in care. Many neonatologists and pediatricians consider this a "routine and unattractive" activity because it does not involve any disease.

In favor of rooming-in, certain aspects are at riskin this period, such as the development of the mother-child bond and the challenge of achieving the best possible breastfeeding experience. In the midst of this apparent calm, regularly, some inadvertent, sometimes severe conditions occur requiring an urgent diagnosis and treatment, or the need of caretaking in relation to chronic conditions. This can also be a fascinating challenge.

The key point of rooming-in is focused on the mother-child dyad and on infant care; it requires pediatricians to have a special motivation based on altruism, communication skills, empathy, time to listen, reflect and talk. Some healthcare providers feel more comfortable with these aspects than others.

Societies of pediatrics around the world and training programs for pediatric interns agree that normal and low risk newborn infants should be seen by the pediatrician, *since birth at the delivery room and throughout the rooming-in period*.[5]

This brings us to our current situation. Pediatricians are invited to go back to playing their role next to newborn infants, but this implies a responsibility of training pediatricians to do so. This is the responsibility of neonatologists at each maternity center, training programs (internships), and pediatricians themselves once they complete their postgraduate courses.

Healthy, low risk newborn infants have particular characteristics that are not seen again during childhood. An adequate neonatal care may be provided by working in coordination between rooming-in and the NICU, under the surveillance of neonatologists, and following basic protocols for the management of the most common conditions in these infants.

Birth is probably the most powerful and unforgettable life experience for both the family and the healthcare provider assisting them. Events that take place in this period are essential for the mother and child, and will have an impact on their development for a long time. The key is to be trained to be there and to recognize what the right time is to discuss the course of care with the neonatologist. ■

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