



NEONATAL CARE

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Abstract

Newborn care is of immense importance for the proper development and healthy life of a baby and Neonatal care is not available to most neonates in developing countries because hospitals are inaccessible and costly. The concept of designations for hospital facilities that care for newborn infants according to the level of complexity of care provided was first proposed in 1976. Subsequent diversity in the definitions and application of levels of care has complicated facility-based evaluation of clinical outcomes, resource allocation and utilization, and service delivery. We review data supporting the need for uniform nationally applicable definitions and the clinical basis for a proposed classification based on complexity of care. Facilities that provide hospital care for newborn infants should be classified on the basis of functional capabilities, and these facilities should be organized within a regionalized system of perinatal care.

INTRODUCTION

What is neonatal care?

Neonatal means 'new born'. Neonatal units like ours specialize in the care of babies born early, with low weight or who have a medical condition that requires specialized treatment.

Newborn babies who need intensive medical attention are often admitted into a special area of the hospital called the Neonatal Intensive Care Unit (NICU). The NICU combines advanced technology and trained health care professionals to provide specialized care for the tiniest patients. NICUs may also have intermediate or continuing care areas for babies who are not as sick but do need specialized nursing care. Some hospitals do not have the personnel or a NICU and babies must be transferred to another hospital.

Some newborn babies will require care in a NICU, and giving birth to a sick or premature baby can be quite unexpected for any parent. Unfamiliar sights, sounds, and equipment in the NICU can be overwhelming. This information is provided to help you understand some of the problems of sick and premature babies. You will also find out about some of the procedures that may be needed for the care of your baby.

Which babies need special care?

Most babies admitted to the NICU are premature (born before 37 weeks of pregnancy), have low birth weight (less than 5.5 pounds), or have a medical condition that requires special care. In the U.S., nearly half a million babies are born preterm, and many of these babies also have low birth weights. Twins, triplets, and other multiples often are admitted to the NICU, as they tend to be born earlier and smaller than single birth babies.

Babies with medical conditions such as heart problems, infections, or birth defects are also cared for in the NICU.

The following are some factors that can place a baby at high risk and increase the chances of being admitted to the NICU. However, each baby must be evaluated individually to determine the need for admission. High-risk factors include the following:

Maternal factors

- Age younger than 16 or older than 40 years
- Drug or alcohol exposure
- Diabetes
- Hypertension (high blood pressure)
- Bleeding
- Sexually transmitted diseases
- Multiple pregnancy (twins, triplets, or more)
- Too little or too much amniotic fluid
- Premature rupture of membranes (also called the amniotic sac or bag of waters)

Delivery factors

- Fetal distress/birth asphyxia (changes in organ systems due to lack of oxygen)
- Breech delivery presentation (buttocks delivered first) or other abnormal presentation
- Meconium (the baby's first stool passed during pregnancy into the amniotic fluid)
- Nuchal cord (cord around the baby's neck)
- Forceps or cesarean delivery

Baby factors

- Birth at gestational age less than 37 weeks or more than 42 weeks
- Birth weight less than 2,500 grams (5 pounds, 8 ounces) or over 4,000 grams (8 pounds, 13 ounces)
- Small for gestational age
- Medication or resuscitation in the delivery room
- Birth defects
- Respiratory distress including rapid breathing, grunting, or apnea (stopping breathing)
- Infection such as herpes, group B streptococcus, chlamydia
- Seizures
- Hypoglycemia (low blood sugar)
- Need for extra oxygen or monitoring, intravenous (IV) therapy, or medications
- Need for special treatment or procedures such as a blood transfusion

Who will care for your baby in the NICU?

The following are some of the specially trained health care professionals who will be involved in the care of your baby:

- Neonatologist. A pediatrician with additional training in the care of sick and premature babies. The neonatologist supervises pediatric fellows and residents, nurse practitioners, and nurses who care for babies in the NICU.
- Respiratory therapists
- Occupational therapists
- Dietitians
- Lactation consultants
- Pharmacists
- Social workers
- Hospital chaplains

The members of the NICU team work together with parents to develop a plan of care for high-risk newborns. Ask about the NICUs parent support groups and other programs designed to encourage parental involvement.

Visiting Guidelines

We're here to promote safety and wellbeing for all our newborns. Please follow these guidelines during your baby's stay in the NICU.

- All visitors must be free of active cold or flu symptoms and should not have been exposed to anyone experiencing cold, flu or viral symptoms. All visitors must wash their hands for 2 minutes at the scrub sink before entering the nursery.

- Due to the risk of infection, visits with the baby are limited to parents, grandparents and brothers and sisters of the parents.
- Healthy brothers and sisters six years of age or older may visit the baby while accompanied by a parent for up to 20 minutes, two times per week. They must remain with the parent and not walk around the NICU unattended. Siblings are not allowed to participate in rooming-in overnight.
- Brothers and sisters must be vaccinated for chicken pox prior to visiting the nursery.
- Visitation is limited to three visitors at a time.
- During the Respiratory Syncytial Virus (RSV) season (October-April), brothers and sisters under the age of 12 are not allowed to visit. RSV is a common and highly contagious disease. Most people who are infected suffer only mild symptoms. For babies, however, RSV can be very serious. Help us protect our little ones!
- No visitors allowed during the hours of 6:30 to 7:30 a.m., 11 a.m. to 1 p.m., 6:30 to 7:30 p.m., and 12 to 2 a.m.
- Parents and grandparents may visit at any time other than those stated above. Brothers and sisters of the parents may visit once the baby is stable after admission from: 3 to 4 p.m. and 8 to 9 p.m. All visitors in the NICU, other than brothers and sisters of the baby, must be at least 12 years old.
- Visitors will be asked to leave when procedures are being done or if an emergency situation occurs within the NICU.
- Premature infants in isolates will have limited holding to no longer than 20 minutes. Holding is reserved for the parents of the baby. The number of times held during the day depends on the baby's individual progress.
- Parents are encouraged to visit around feeding and exam times that occur every three hours, so as not to disturb a sleeping baby.
- For the privacy of each baby, please refrain from asking about or visiting any other baby in the nursery.
- Please limit cell phone use in the NICU.
- Parents will be asked to review the policy hand-out and to complete a Family Contact Flow sheet (to provide the NICU staff with accurate contact information and names of individuals who will be allowed to visit the baby). This document will then be placed in the medical record for reference during the baby's hospital stay.

Levels of care

The concept of designations for hospital facilities that care for newborn infants according to the level of complexity of care provided was first proposed in the

United States in 1976. Levels in the United States are designated by the guidelines published by the American Academy of Paediatrics in Britain, the guidelines are issued by The British Association of Perinatal Medicine (BAPM), and in Canada they are maintained by The Canadian Paediatric Society.

India

India has 3-tier system based on weight and gestational age of neonate.

Level I care

Neonates weighing more than 1800 grams or having gestational maturity of 34 weeks or more are categorized under level I care. The care consists of basic care at birth, provision of warmth, maintaining asepsis and promotion of breastfeeding. This type of care can be given at home, sub center and primary health center.

Level II care

Neonates weighing 1200-1800 grams or having gestational maturity of 30–34 weeks are categorized under level II care and are looked after by trained nurses and pediatricians. The equipment and facilities used for this level of care are including equipment for resuscitation, maintenance of thermo neutral environment, intravenous infusion, gavage feeding, and phototherapy and exchange blood transfusion. This type of care can be given at first referral units, district hospitals, teaching institutions and nursing homes.

Level III care

Neonates weighing less than 1200 grams or having gestational maturity of less than 30 weeks are categorized under level III care. The care is provided at apex institutions and regional perinatal centers equipped with centralized oxygen and suction facilities, servo-controlled incubators, vital signs monitors, transcutaneous monitors, ventilators, infusion pumps etc. This type of care is provided by skilled nurses and neonatologists.

References

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