INTRODUCTION

All expectant parents anticipate the birth of a healthy full-term baby. Having a baby in the Neonatal Intensive Care Unit can cause you to have feelings of frustration, guilt, confusion or sadness. These are normal reactions. Our NICU team here at Women’s & Children’s Hospital is committed to providing your baby with the best possible start in life while helping you, as a family, cope with your baby’s hospitalization and discharge to home.

You will have many questions and concerns about your baby, about the nursery, and about the care your baby is receiving. This booklet will help explain why your baby needs special attention, and will introduce you to the NICU. We believe family participation in your baby’s care is essential to his/her well-being and development.

A family-centered care philosophy is fostered and supported by our staff and the physical environment of our NICU. We encourage you to call and visit the nursery as often as you can. You will be given a list of special visiting hours and phone numbers you can call to check on your baby’s condition.

This book provides a section for parents to keep up with their newborn’s progress. Please feel free to write in it anytime you wish.
Your first visit to the NICU can be a little scary and stressful. We will do our best to make sure you are familiar with the equipment and are given the opportunity to have your questions answered by members of our staff. This time may also be used for our staff to gather information from you that we need to care for your baby. * Your first visit is the best time to get to know your little one and begin your bonding process. You will be given the opportunity to interact with your infant in a way that is best for him/her. Some infants will require "minimal stimulation" which will allow parents to use a firm touch and a soft voice. Other infants will be more stable and parents will be allowed time to interact with them. Depending on your infant’s condition, you may or may not be able to hold your infant during your visit. We will do our best to allow you the most interaction with your baby.
Understanding the Equipment and Monitors

1. Cardio-Respiratory Monitor

The cardio-respiratory monitor or heart monitor measures and records some of the baby’s vital functions. This monitor will record the infant’s heart rate, blood pressure and breathing rate. Alarms are set for both high and low rates, so in the event your baby’s vital signs are irregular or abnormal, the monitor will sound. Sometimes there are false alarms for varied reasons. The medical teams at the bedside are skilled in responding to the alarms and finding a solution. The baby is usually placed on the cardio-respiratory monitor until discharged and ready to go home.

2. CPAP/HFNC

Continuous positive airway pressure or what we call “CPAP” provides a steady flow of oxygen through a small face mask or small prongs that fit into the baby’s nostrils.

3. ET Tube

An endotracheal (ET) tube is a small, soft, flexible tube that is passed through the mouth past the vocal cords and into the trachea or windpipe. This process is called intubation. The ET Tube is then connected to a ventilator to assist the baby with breathing. Because this tube passes between the vocal cords, you will not be able to hear your baby’s cry while the tube is in place.

4. Feeding Tube

Most premature or sick infants will start feeding by gavage. Gavage feeding is a method where a small, flexible tube called a feeding tube is inserted through the nose or mouth, down the esophagus and into the stomach. Gavage feeds are also referred to as tube feedings. When a tube is placed through the nose and into the stomach, it is referred to as a naso-gastric tube, or NG tube. NG tubes are left in place once an infant begins to bottle-feed, so that the tube does not get in the way of the baby’s tongue. When a tube is placed through the mouth and then goes into the stomach, it is referred to as an oro-gastric tube, or OG tube. It is used for feedings until the infant is strong enough to suck from the bottle or is breastfed.

5. Incubator (“ISOLETTE”)

Many babies in the NICU are unable to maintain their own body temperature and are therefore placed in an incubator. The incubator provides body warmth, humidity and protection from outside stimulation. Portholes allow for easy access without allowing cold air in or heat out.
6. **Nasal Cannula**

A nasal cannula is used when a baby needs a steady flow of oxygen to help him/her breathe as opposed to the positive pressure released by a CPAP machine. Soft pliable plastic prongs are placed inside the baby’s nostrils while warm, moist, oxygenated air flows into the nose.

7. **Open Crib**

An open crib is a clear plastic bassinet that your infant graduates to when they are close to going home. Preterm infants must be medically stable and able to maintain their temperature to graduate to the open crib and weigh 1500–1800 grams.

8. **Oxygen Hood**

In the event that your baby is breathing on his/her own, but still needs some respiratory support, an oxygen hood may be prescribed. The hood is made from clear plastic and is placed directly over the baby’s head. The hood is connected to an oxygen source that provides the newborn with supplemental oxygen.

9. **PAL (Peripheral Arterial) Catheter**

A PAL is a catheter placed in an artery in the arm or leg. The purpose of a PAL is to enable the staff to continuously monitor the baby’s blood pressure and to allow them the ability to draw blood for tests and gases without sticking the baby. This is especially important for babies who have breathing problems and are placed on a ventilator.

10. **Phototherapy Light**

In the event that your baby is diagnosed with jaundice, also called hyperbilirubinemia, phototherapy lights are often used. These special "light banks" have bulbs that give off light in the blue spectrum. The lights alter the bilirubin in the skin to a water-soluble form so that the baby can rid the body of extra bilirubin through the urine or stool. Bilirubin is a substance in the blood produced by the breakdown of red blood cells. After applying a soft mask to protect your baby’s eyes, the infant will be placed under the lights to expose the skin to lower his/her bilirubin level. For maximum exposure, babies under phototherapy lights wear diapers only.

11. **PICC (Peripherally Inserted Central Catheter)**

A PICC line is a long, very thin, soft tube made of silicone or polyurethane that is placed in a blood vessel, in the arm, scalp, or leg. The catheter is then moved upward through the body so the tip is in a big, vein near the heart. A PICC is used when long-term medication therapy or IV fluids are needed.
12. Peripheral IV (PIV) Catheter

Peripheral IVs are inserted through the skin into a small vein. The IV allows the NICU staff to give your baby fluids, such as sugar solutions and medications. A PIV in a baby is much the same as in adults, only smaller.

13. Radiant Warmer

Your baby may be placed in an open bed warmer immediately following birth to help maintain the body temperature and until he or she is medically stable. The temperature probe from the warmer is attached to the infant by a probe cover. The probe senses the temperature of the newborn and adjusts the heat as needed.

14. Umbilical lines/tubes (UVC/UAC)

A tiny tube may be inserted in an artery or vein in the baby’s belly button (umbilicus) so that small amounts of blood can be taken for testing without using a needle. This tube also measures blood pressure and may be used to give IV fluids and medicines. While this sounds painful, it is not. There are no nerve endings in your baby’s belly button where the catheter is inserted.

15. Ventilator

A ventilator is a machine attached to the baby’s ET tube which pumps oxygen into the lungs with a controlled pressure that helps the baby breathe.

It is a challenging, exhausting, stressful environment but the rewards are immense.

Dr. Cecilia Stewart, Neonatologist
Common Tests and Treatments

The following listing provides explanations and information regarding various tests and treatments that may be necessary to help your baby during his/her time in the NICU.

1. **Antibiotics** are medications given by mouth or IV to help your baby fight infection.

2. **Bagging** is when a soft rubber or latex bag and mask are used to fill your infant’s lungs with air and oxygen.

3. **N.P.O.** is a Latin abbreviation for "nothing by mouth."

4. **Nutrition** is anything that nourishes such as breast milk, formula, or IV fluids.

5. **Blood Gases** are a measurement of the amount of oxygen, carbon dioxide, and acid in your infant’s blood drawn from an artery (ABGs, Arterial Blood Gases) or from smaller capillaries (CBGs, Capillary Blood Gases).

6. **Phototherapy Light** or Blanket is a special light, much like artificial sunlight that is used to "brew down" bilirubin in "jaundice babies" so it can be passed in the infant’s urine and bowel movements.

7. **Hyperalimentation** (also called Hyperal/TPN/PIA) is a special mix of nutrients and fluids given to infants through a vein when unable to be fed nourishment by mouth.

8. **Hearing Screen** is a test used to check for any early signs of hearing problems.

9. **Eye Exam** is done by an ophthalmologist to see if the blood vessels in the retina have developed normally.

10. **Oxygen** is a gas in the air that we breathe. Room air contains 21% oxygen. Sick or premature infants may need extra oxygen, and some require pure oxygen.

11. **Sleep Study** is a test done for infants at risk for breathing or heart rate problems. The test helps doctors decide if a home monitor is needed.

12. **Ultrasound** is a machine that uses sound waves to produce pictures of internal body tissues, such as the head or heart.
Special Considerations:
Common Problems of the Premature or Sick Newborn

Prematurity

Premature babies are often not mature enough to live outside the womb without special help. They may need help with feedings, breathing, or just keeping warm. Each baby has special needs that may require the use of intravenous therapy, breathing machines or other special treatments. Premature babies must often stay in the hospital for several weeks or months, until they have developed enough to stay home with their parents.

Respiratory Distress Syndrome (RDS)

This is a condition of premature or term infants caused by an absence of a chemical in the lungs called surfactant. This chemical coats the inside of the lung sacs and prevents them from collapsing when the baby breathes out. Depending on the amount of surfactant present at birth, some infants need only oxygen therapy while others require a breathing machine or ventilator to help prevent the lungs from collapsing. Infants begin producing surfactant at birth. Babies usually need increasing respiratory support during the first 48-72 hours, then show a gradual improvement. The need for respiratory help can be as short as two days or as long as several weeks.

Apnea and Bradycardia (A&B)

Because premature babies have immature or under developed nervous systems, they often forget to breathe and must be reminded with gentle stimulation or special medications. Apnea (the absence of breathing) is very common among premature babies in the early weeks of life. Apnea is often accompanied by bradycardia - a lower than normal heart rate. Often times you will see your baby’s nurse rub his/her back or foot to make your infant take a breath and bring the heart rate up.

Jaundice (Hyperbilirubinemia)

Bilirubin is produced when red blood cells are broken down by the body. Normally, bilirubin is processed in the liver and then deposited in the intestine so it can come out in the stool. In premature infants the liver does not function well enough and bilirubin builds up in the body, giving the skin a yellow tone usually referred to as Jaundice. Jaundice is treated with special lights (phototherapy lights) which break down bilirubin in the skin and allow the body to excrete it more easily. High bilirubin levels may enter the brain and cause damage. Phototherapy lights help prevent this problem.
Meconium Aspiration

This is a condition in which the baby inhales amniotic fluid containing meconium, the baby’s first stool. This results in partial obstruction of the breathing tubes and an irritating pneumonia. The condition can be mild or severe.

Patent Ductus Arteriosis (PDA)

A large vessel outside the heart connects the blood flow to the lungs with the blood to the body. This vessel is normally open during life in the womb; however, when it fails to close after birth it results in increased blood flow to the lungs and interferes with the baby’s breathing ability.

Sepsis (Infection)

An infection caused from bacteria or a virus that gets into your baby’s bloodstream. It can cause mild to severe complications and is treated with different medications depending on the cause.

Bronchopulmonary Dysplasia (BPD)

A lung condition of premature infants in which the “air sacs” in the lungs become too “floppy” and do not completely deflate. Babies with this condition may require oxygen until their lungs heal. Additional information will be given to you if this condition should affect your infant.
Intraventricular Hemorrhage (IVH)

IVH is bleeding in the brain. Bleeding can be very mild or severe. IVH is thought to affect about 4 in every 10 preemies who weigh less than 3 pounds at birth. Treatment is planned according to the severity of the bleeding and where it’s located.

Retinopathy of Prematurity (ROP)

Babies born very early may have an eye problem called retinopathy of prematurity. The back of the eye (retina) may be damaged, often needing special treatment. Whether or not the baby’s eyesight is affected depends on the severity.

Aspirate (also known as Residual)

The amount of digested milk left in your infant’s stomach. It is usually checked before a feeding is given.

Desaturations (Desats)

Short periods of time when the oxygen in your infant’s body drops below desired or acceptable levels.

Tachypnea

An abnormally fast breathing rate, usually faster than 60 beats per minutes in an infant.

Necrotizing Enterocolitis (NEC)

This is an infection of the intestines of premature babies and may require a delay in feeding, medication, or possibly, surgery.

I love working with the staff at this hospital. It is amazing to work with people who treat these babies as if they were their own.

Dr. Josseline Belizaire, Neonatalogist
Getting Acquainted

Getting acquainted with your baby begins with your first visit to the NICU. We ask parents to try not to focus on the equipment and not expect to understand everything at the first visit. Instead, take this time to validate that you have had your baby, and he or she is here waiting for you. On each visit thereafter, you will become more knowledgeable about your baby’s condition and will become more familiar with your baby and the NICU environment.

First Feeding

For the first few hours after birth, your baby will probably be NPO – nothing by mouth. Your baby will be receiving nutrition in the form of IV fluids or TPN (Total Parental Nutrition) and Lipids through an IV line. After a few hours, or maybe even a few days, depending on your baby’s status, your baby will begin receiving small feedings of breast milk or formula through a feeding tube.

Corrected Gestational Age

You will often hear about your baby’s corrected gestational age. This describes how mature your infant is after birth and is calculated by adding the "calendar age" (number of weeks after birth) to the gestational age in weeks at birth.

Example:
28 weeks = length of pregnancy
+ 6 weeks = calendar age
34 weeks corrected gestational age

Physical Appearance

23 – 25 Weeks Gestation

Preemies at this age, the youngest of all, sleep almost all of the time. They do however reach a drowsy state from time to time, when they are more responsive to external stimulation like sound and touch. Your baby’s sense of touch is well developed already. Your baby will let you know when he/she is being handled in ways he/she likes or dislikes and you’ll soon come to recognize those cues.

The average weight for a baby at this gestational age is 1lb. 12 oz. and is 12 inches long. The earlobes are flat and soft and can be folded easily and have little fat or muscle tissue beneath the skin.
Physical Appearance

23 – 25 Weeks Gestation (continued)

Your baby’s skin is thin, transparent, shiny, and extremely fragile, so you may have to wait a couple of weeks before touching him/her. Skin color will vary from red to pink with his/her natural coloring not coming in for 4–8 more weeks. Some vernix may also be present (white “cheesy” substance that protects skin). There are no creases on the soles of the baby’s feet.

At this age, eyelids are normally still fused together. Baby will begin to see light in 2–3 weeks.

Your baby’s posture is completely flat because he/she doesn’t have muscle tone, and can’t flex his/her limbs yet. Little arms and legs may flutter slightly, as if they were still floating in amniotic fluid. Movements are uncoordinated with a trembling or jerky quality because nerves and muscles are still immature.

Baby’s lungs aren’t developed enough for him/her to breathe independently, so your baby will need the help of a ventilator to give him/her the oxygen he/she needs.

Your baby may also have catheters or “lines” inserted into his/her umbilical vessels to provide nutrition, allow for blood pressure monitoring, infusion of medication, and to facilitate the drawing of blood.

When your baby is stable enough to tolerate touch, your nurse will show you how to apply a firm touch rather than stroking, which may be difficult for your baby to withstand at this gestational age.

26 – 29 Weeks Gestation

A baby born at 28 weeks gestation usually weighs 2lbs. 7 oz. and is about 15 inches long. The skin is more pink than red. It is less transparent although veins are still visible. Thick vernix covers the skin at birth and long thick lanugo is present, especially on the back. The nails on the fingers and toes are developed. There are faint red marks (which are the beginning of creases) on the soles of the feet near the toes. The eyelids are open. The earlobes are

I have been a NICU nurse for 29 years and I am thrilled at the amazing advancements made in technology over the last few years. We can do so much for the babies to help them grow and develop into healthy, active children.

Also, it is wonderful to work with a staff that offers such support to each other. I am proud to be a member of the staff in this NICU because we truly work as a team to provide great care for our patients and the families of our patients.

Chris Cornell, RN
NICU Nurse
26 – 29 Weeks Gestation (continued)

soft and easily folded but are beginning to spring back on their own. The baby has developed some fat and muscle tissue under the skin and can bend his/her arms and legs.

Babies of this age still sleep most of the time, but their sleep is becoming more regular, with quieter periods in which body movements almost stop, alternating with more active sleep. Slumber is necessary for your baby’s nervous system to mature.

You may be amazed at the strength in which your baby can suck on the pacifier shortly after birth. His/her ability to suck is incredible considering his/her size, but it doesn’t mean your baby is ready to begin breast or bottle feeding. That ability will surface somewhere around 34 weeks.

30 – 33 Weeks Gestation

At this gestational age premature babies can already sense a lot of the world around them even though they are still 7–10 weeks from term. The baby can weigh, on average, 3lbs. 10oz. and is 16 inches long. The skin is pale pink and thickening with some peeling. Only a few of the larger blood vessels can be seen through the skin (abdominal area). Vernix still covers the skin and the lanugo which was once thick, is thinning, especially on the lower back. The baby will have sole creases to the middle of the foot. The eyes are open. Cartilage is beginning to form in the earlobes and they will spring back if folded. More muscle tone is developed at this stage and baby can keep his arms and legs slightly bent while at rest.

Along with a more mature type of sleep, the preemie at this stage also has a more mature wakefulness. If medically stable, your baby can probably remain awake and alert for a few minutes at a time, and is able, for short periods, to focus on the world around him/her. Your baby’s sensory and motor functions get involved and his/her new experiences provide stimulation that helps him/her develop further.

34–36 Weeks Gestation

Babies born 4–6 weeks before term may need intensive medical care. They will have the slender appearance of a more premature baby but their neurological development is quite advanced. Sense of touch, sight, hearing, and smell are almost as fully developed as those of a full term infant.

A baby around 36 weeks gestation will usually weigh 5lbs. 12 oz. and will be 19 inches long. Skin appears pale overall and pink over the ears, lips, palms, and feet. Thickening and some cracking and peeling are noted on the hands and feet. There are areas where the lanugo is no longer present. Hair on the head is frizzy, wooly, and sticks together. The skin has a thick covering of vernix at birth. Creases reach the middle of the soles of the feet and the earlobes are well formed with cartilage, springing back immediately when folded. With muscle tone being quite developed, your baby will hold a froglike position with the arms bent at the elbow.

Your baby still may sleep 18–20 hours a day. Most babies at this stage can coordinate sucking with swallowing and breathing, which is why this is the age your baby will begin to breast or bottle-feed.

You are now able to console him/her with your familiar voice, as your baby is able to express his/her needs, likes, and dislikes. Although your baby thrives on your presence and enjoys interactions with you, he/she still needs lots of time to be allowed to sleep peacefully.
Parenting in the NICU

It can be frustrating as a parent, when you are unable to hold your baby especially if his hospitalization is a lengthy one. Premature and sick babies need the love and nurturing of their parents to grow and thrive. Doctors, nurses, and other staff members are working to provide a stimulus that nurtures your baby’s development. As parents, you will be introduced slowly and carefully as it accommodates your baby’s gestational age and medical status. At first it may be hard to recognize your baby’s responses, but with practice and guidance from staff, you and your baby will learn to respond to each other in a positive way.

Many times good parenting in the NICU means respecting the baby’s need to rest even when it may conflict with your desire to hold or touch him.

Again, your baby’s gestational age will determine what kind of activities or stimuli he can handle and the best times for those interactions. When you do interact with your baby, observe his/her response and adjust your care as needed. Remember that you do not want to bring your baby to the point of over stimulation before you adjust the stimuli so please proceed with loving caution.

As your baby continues to grow or recover from illness, activities can last longer and be more satisfying. Once baby’s condition is stable you will be encouraged to hold your baby, take his/her temperature, change his/her diaper, hold his/her feeding tube, bathe him/her, and perform kangaroo care. These steps will progress to the day when you are able to breast or bottle feed your baby.

Comforting Your Baby

If your baby becomes upset, disoriented, and irritable, these interventions may help to calm and soothe him.
- Offer a pacifier.
- Provide a firm gentle touch rather than a “stroking touch.”
- Gently position and swaddle your baby in flexion. We use positioning aides in the NICU to help with this.
- Speak in a quiet, soothing voice.
- Read to your baby. You may bring a book of your choice to read to your infant.
- Hold your baby securely when he/she is medically stable. Swaddle your baby with arms brought in and up securely wrapped and positioned in flexion with arms over his/her chest.
- Always remember to look for signs from your baby that he/she is becoming stressed like frantic movement, changes in heart rate and/or breathing and sometimes even hiccups!

Learn to observe your baby and recognize his/her forms of communication with you.
Comforting Your Baby (continued)

If medically stable, your baby looks forward to being held by his/her parents, having you change his diaper, hold the feeding tube, bathe him/her, and do skin-to-skin kangaroo care.

In your baby’s world at this stage there are plenty of interesting sights, sounds and smells. Vision takes a big leap forward and preemies enjoy scanning the world around them in their moments of wakefulness. Your baby’s hearing will also improve, although he still will not be able to hear whispers until 34 weeks.

Your baby is beginning to exhibit some built-in self-comforting behaviors now. At 32 weeks sucking becomes stronger and better coordinated with swallowing. The rooting reflex will appear at this time. This means if you touch him/her near the mouth your baby will turn his/her head in that direction in search of a nipple to latch onto. These new and exciting signs are letting you know that your baby will soon be ready for breast or bottle-feeding.

Parenting becomes more fulfilling at this age as your baby’s new world opens up. Although your baby is more focused, he/she is more apt to feel stressed and over stimulated. Try stimulating one sense at a time, and only for a short period. For instance, singing or talking softly, holding him/her, or just letting your baby gaze at your face.

Feedings

IV Feedings
A baby with breathing problems or a very young premature baby cannot be given anything by mouth at first. Your baby’s immature digestive track must slowly and cautiously be introduced to its new role in providing nourishment. Also, if a baby is too sick or too stressed, he/she may have poor circulation to his/her digestive track. Therefore, many premature babies receive their first feedings intravenously.

Gavage (Tube) Feedings
As your baby progresses, he will begin gavage or “tube” feedings. A small soft flexible tube passes down into the stomach or intestines. The tube may be left in place for continuous feedings and will be changed when needed. Transitioning from IV to tube feeding is made gradually and the two may overlap. As gavage feedings are increased, IV feedings are decreased and stopped once a baby is receiving enough calories by gavage. This "NG" or "OG" tube is also used to remove extra air or check "residual" left in baby’s stomach.

It is gratifying to help these precious babies reach their fullest potential; and it is wonderful to know that you make a difference.

Stephanie Hebert, RNC
NICU Nurse
**Feedings (continued)**

**Breastfeeding**
If you had planned to breastfeed during your pregnancy, you don’t have to give up the idea. You will be given the opportunity to pump milk for your baby with the help of a lactation consultant and your baby’s nurses.

Studies show that mother’s breast milk is the best food for almost all infants. Doctors will advise if your baby also needs extra nutrients (protein, vitamins, carbohydrates, and fats) added to the milk. Keep in mind that breast milk feedings are helpful for both you and your baby. Breast milk of mothers who give birth early (prematurely) is higher in the nutrients and other agents that help fight infection and promote health. It is known that babies given breast milk are more likely to have:

- reduced risk for infection, retinopathy of prematurity (ROP), and necrotizing enterocolitis (NEC)

For babies, studies show that breast milk is best and is helpful for those born with a low (less than 2,500 grams or 5.5 pounds) or very low birth weight (less than 1,500 grams or 3.3 pounds).

**Formula Feeding**
If you are unable to breastfeed, or decide not to do so, your baby will be given a special formula for premature or sick infants.

**Kangaroo Care**

Kangaroo Care is basically skin-to-skin holding by one of the baby’s parents. It can be done by Mom or Dad.

Most studies have proven that Kangaroo Care has a major, positive impact on babies and their parents. Research has shown that Kangaroo Care has been beneficial in lowering the amount of oxygen required, decreasing the number of apnea and bradyycardic episodes, and assisting with stabilization of temperature. For breast feeding moms, Kangaroo Care also helps with stimulation of milk production as a result of the skin-to-skin contact.

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*The most rewarding part of being a NICU nurse is seeing our babies get to go home with their parents.*

**Jenn Arceneaux, RNC**
**NICU Nurse**
Preparing for Discharge

Before the exciting journey home, these guidelines below will tell us when your baby is ready. Each NICU will have its own guidelines regarding discharge of your baby from the hospital. Listed below are some of the more common guidelines used.

- Your baby will be able to control his/her own body temperature and keep warm without the help of an incubator.
- Your baby will be able to breathe on his/her own, without the aid of a respirator or ventilator. (However, some babies are allowed to go home on oxygen.)
- Your baby can be breastfed or fed from a bottle.
- Your baby’s medical condition is stable.
- Your baby weighs around 4 - 5lbs. and is gaining weight at a steady rate.

Although we know you’re very happy that your baby is going home, we understand that you may be a little nervous. This is completely normal. Don’t worry, your NICU staff will not send you home unprepared. The NICU nurses are trained to help you get ready and guide you as you practice your baby’s daily routines before taking him/her home. The nurses will help you bathe your baby and change his/her diapers. They’ll coach you while you breastfeed or give your baby a bottle and will answer all of your questions.

They will also teach you how to take your baby’s temperature and watch for signs of illness. If your baby is going home on oxygen or wearing some type of monitor, they will show you how to properly use all pieces of equipment. They will instruct you in the use of any medications as well.

While your baby is still in the NICU, it is a good time to take a course in infant CPR (cardiopulmonary resuscitation). This life-saving course will teach you how to get your baby’s heart and lungs working again if they should ever stop for any reason. Chances are you won’t ever need to use CPR on your baby, but knowing it will increase your confidence and could save your baby’s life.

Taking your baby home is a big step, and we know you can handle it! It will help to spend as much time as possible with your baby in the NICU before going home. The staff will do everything they can to make the transition home the wonderful event you’ve been waiting for!
Pre-discharge Checklist for Mom

Before the exciting journey home, take a few minutes to review the checklist below. It’s best to complete this section several days before your baby’s discharge date so if there are things you still need to ask or do, such as take a CPR class, there will be time before going home.

I am
- comfortable giving my baby a bath.
- comfortable feeding my baby.
- comfortable giving him/her medicines.

I
- know how long to breastfeed or how much to feed.
- know how to mix the infant formula.
- know how to take axillary (underarm) temperature and how to read the thermometer.
- know how to use a bulb syringe.
- know how to perform CPR on my baby if necessary.
- have a car seat I will use to take my baby home.
- know how to use a car seat properly and where and how to position it in my car.
- have clothes for my baby to wear home.

Discharge Questions?

- Do you know and understand what was wrong with your baby?
- Do you know and understand what problems or conditions may continue after your baby is discharged and how to handle them?
- Have you discussed your baby’s feeding needs and schedule with you doctor?
- Do you know what follow-up appointments your baby needs and why he/she needs them?
- Have you scheduled the appointments? If not, do you have phone number(s) to do so?
- Did you complete a course in CPR?
- Is there anything else you want to know or practice before taking your baby home?

As difficult as it was to leave my baby’s bedside every afternoon, I was comforted in knowing that he was receiving the best possible care.

Cole’s Mom
Glossary

While your baby is in the NICU, you may hear many new terms that are unfamiliar to you. Here are some of the more common ones and their meanings. You’ve already been introduced to some of them in this book.

Glossary

Alveoli – Tiny sacs in the lungs where oxygen and carbon dioxide are exchanged in the blood stream.

Anemia – An abnormally low number of red blood cells, which are the cells in the blood that carry oxygen to the tissue. Anemia is very common in babies in the NICU, especially premature ones. Severe anemia is treated with blood transfusions. Babies with anemia are also given vitamins and iron to build up their blood.

Antibiotics – Drugs that fight germs, kill bacteria or interfere with their growth, and help cure or prevent infections.

Aorta – The artery leading from the heart that supplies the body with oxygenated blood.

Apnea – A temporary stop or pause in breathing.

Areola – The dark area on the breast surrounding the nipple.

Arterial blood gas test – A sampling of blood from an artery for its oxygen, carbon dioxide, and acid content.

Arterial catheter – A thin plastic tube placed in an artery to give baby nutrients, blood and medications, and to withdraw blood for testing. Arterial catheters are most commonly placed in an umbilical artery.

Artery – Any blood vessel that leads away from the heart. Arteries carry oxygenated blood to the body tissues, except for the pulmonary artery that carries non-oxygenated blood from the heart to the lungs.

Bacteria – One-celled organisms that can cause disease.

Bagging – Squeezing a bag to pulse air and/or oxygen into a baby’s lungs through a mask that covers the baby’s nose and mouth.

Bililights – Special, intense lights placed above baby’s bed to treat jaundice.

Bilirubin – A yellowish-red pigment produced when red blood cells break down. An excess of Bilirubin in the bloodstream causes jaundice.

Blood gas – A test to determine the oxygen, carbon dioxide, and acid content of a sample of blood.

Blood pressure – The pressure the blood exerts against the walls of the blood vessels. It is this pressure that causes the blood to flow through the veins. The blood pressure measurement is given in the form of two numbers. The top number, the systolic pressure, is the measurement of the pressure exerted when the heart contracts and sends blood to the body. The bottom number, the diastolic pressure, is the measurement of the pressure exerted during the relaxation between heartbeats.

Blood transfusion – Putting blood from a donor into a baby’s blood circulation. Blood types are matched carefully and donor blood is tested thoroughly.
**Glossary (cont.)**

**Bonding** – The process by which parents and baby become emotionally attached.

**Bronchopulmonary dysplasia (BPD)** (brong’ ko pul’ moner’ e displ –a zha) – This lung problem occurs in some premature babies and requires treatment with oxygen or a breathing machine for a prolonged time.

**Bradycardia** – A slower-than-normal heartbeat, usually below 100 beats per minute in infants. This usually accompanies apnea.

**Bronchial tubes** – The tubes that lead from the trachea (windpipe) to the lungs.

**Capillaries** – Tiny blood vessels that come into close contact with the body cells to supply the cells with oxygen and nutrients and to remove waste products.

**Carbon dioxide** – A waste product of bodily processes that is carried by the blood to the lungs where it is exhaled.

**Cardiologist** – A doctor who specializes in the branch of medicine dealing with the heart and circulation.

**Cardiopulmonary resuscitation (CPR)** – A method of reviving a person whose breathing and heartbeat have stopped or slowed abnormally.

**Catheter** – A thin tube used to administer fluids to the body or drain fluids from the body.

**Computerized Axial Tomography (CAT) scan** – Pictures that give a 3-D view of the body’s internal organs and structures.

**Central line** – An intravenous line that is threaded through the vein until it reaches a position as close as possible to the heart.

**Central nervous system** – The brain and spinal cord.

**Cerclage** – A procedure sometimes used to reinforce an incompetent cervix, which involves stitching the cervix closed during pregnancy.

**Cervix** – The lower section of the uterus that shortens (effaces) and opens (dilates) during delivery.

**Colostrum** – The breast milk produced in the first few days after delivery. This milk is especially rich in nutrients and antibodies.

**Continuous Positive Airway Pressure (CPAP)** – Pressurized air, sometimes with additional oxygen, that is delivered to the baby’s lungs to keep them expanded as the baby inhales and exhales.

**Digoxin (dij-ox’in)** – A heart medicine that makes a baby’s heartbeat stronger and more regular.

**Electrodes** – Devices attached to adhesive pads that are placed on a baby’s body to conduct the electrical impulses to his heartbeat and breathing motions to a monitoring machine.

**Endotracheal tube** – A thin plastic tube inserted into the baby’s trachea (windpipe) to allow the delivery of air and/or oxygen to the lungs.

**Full-term baby** – A baby born between 37 and 42 weeks of gestation.

**Gastroenterologist** – A doctor who specializes in disorders of the digestive system. A “pediatric gastroenterologist” only treats infants and children.

**Gavage feeding** – Feeding given through a tube passed through the nose or mouth and into the stomach.

**Gestation** – The length of time between the first day of the mother’s last menstrual period before conception and delivery of the baby.

**Gestational age** – Baby’s age in weeks from the first day of the mother’s menstrual period before conception until the baby reaches term (40 weeks).

**Geneticist** – A doctor who specializes in the study and treatment of disorders or conditions that tend to run in families.
Glossary (cont.)

Glucose – The type of sugar that circulates in the blood and is used by the body for energy.
Gram – A unit for measuring weight. One gram equals 1/28th of an ounce. .454 grams equal one pound.
Heel stick – The procedure of pricking a baby’s heel to obtain small amounts of capillary blood for testing.
Hematologist – A doctor who specializes in the treatment of blood problems.
Hyperglycemia – Abnormally high sugar levels in the blood.
Hypoglycemia – Abnormally low sugar levels in the blood.
Human milk fortifier – A nutrients supplement added to breast milk to meet special needs of premature infants.
Imaging studies – Tests and exams that involve taking pictures of internal organs. X-ray pictures are one kind of imaging. Ultrasound exams are another. More advanced examples of imaging are CAT scans and MRI.
Infections disease specialist – A doctor specializing in the treatment of contagious diseases.
Incubator (in’-cu-ba-tor) – A small bed enclosed in plastic for newborns. It keeps the baby’s body warm and at an even temperature.
Infant development – The mental and physical progress of a baby.
Infusion pump – A pump attached to an intravenous line to deliver IV fluids to the baby in tiny, precisely measured amounts.
Intake – Nourishment (liquids for infants) taken in by the body. The opposite of “intake” is “output” which refers to fluids and solids that leave the body in the form of urine and stool. A baby’s intake can come from IV feedings, the breast or the bottle.
IV feedings – IV stands for “intravenous,” which means “into a vein.” Both foods and medicines may be given by IV.
Intraventricular Hemorrhage (IVH) (in’ tre ventrik’ yeler hem arij) – This term means bleeding in the brain. IVH can be very mild or severe. It’s thought to affect about 4 in every 10 babies who weigh less than 3 pounds at birth. If doctors suspect a baby has IVH, they do tests for proper diagnosis. Treatment depends on how severe the bleeding is and where it’s located.
Intubation – The insertion of a tube into the trachea (windpipe) to allow air to reach the lungs.
Isolette – An incubator, which is an enclosed, heated bed.
Jaundice – The yellowing of the skin and whites of the eyes caused by excessive levels of bilirubin in the blood.
Lab technician – A person who specializes in the study of blood and tissue samples.
Lanugo – The fine, downy hair that covers the fetus from about the fourth or fifth month in the womb and disappears toward full term. Lanugo is often still present on premature babies.
Lasix – A drug that helps reduce swelling or fluid accumulation by increasing urine output.
Level II Nursery – Babies are brought to a Level II Nursery after the NICU before they are moved to a standard nursery. The care in a Level II Nursery is less intense than care in the NICU but still offers more specialized care than a standard nursery.
Low birth weight – A weight at birth of less than 2500 grams (about 5 pounds).
Monitor – A machine that records signs such as heartbeat, breathing, and body temperature.
Magnetic Resonance Imaging (MRI) – MRI is used to visualize pictures of internal organs and tissues.
Mucus – A sticky secretion produced by mucus membranes.
Necrotizing Enterocolitis (NEC) (nek’-ruh-tize-ing ent-er-o-koh’lit-is) – A severe problem with the intestines. The cause is not very well understood. Babies with NEC are often given medicine to treat infection that is often present. They also receive fluids in a vein to provide their bodies with enough water and food until their intestines are ready to be used.
Neonatal – A word meaning “near the time of birth.”
Neonatal nurse – A registered nurse who specializes in the care of babies in the NICU.
Neonatal nurse practitioner – A registered nurse who has received special training in the management of newborn infants. This nurse is qualified to perform some procedures generally done by physicians.
Neonatology – A specialty field in medicine and nursing, devoted to the care of premature and sick newborns.
Neonatologist – A doctor who specializes in pediatrics and has taken further specialty training in the care of sick newborns.
Nervous system – The brain and the nerves that connect it with all parts of the body. The job of the nervous system is to receive all information coming in (pain, pleasure, sights, sounds, and so on) and send messages to organs and tissues telling them what to do (draw away from the object causing pain, smile with pleasure, and so on).
Neurologist – A doctor who specializes in disorders of the brain and nervous system.
NG feedings – NG stands for “nasogastric” which means “going from the nose into the stomach.” Feedings are given through a small flexible tube inserted through the nose and down the esophagus and into the stomach. Formula or breast milk is dripped into the tubing at a steady rate.
NG tube – A small, flexible tube inserted through the nose, down the esophagus, and into the stomach. Used to gavage-feed a baby.
Neonatal Intensive Care Unit (NICU) – An area of the hospital designated for the care of sick newborns.
Occupational therapist – A health care specialist who helps babies improve control of their small muscles so they can develop at the normal rate. Occupational therapists also help adults, through different therapy techniques.
OG feedings – OG stands for “orogastric,” which means “going from the mouth into the stomach.” OG feedings are given much the same way as NG feedings, except that the tube is passed through the baby’s mouth.
OR – Operating room.
Orthopedist – A doctor who specializes in disorders of the bones and connective tissues.
Otolgist – A doctor who specializes in disorders of the ear.
Output – Fluids and solids that leave the body in the form of urine and stool. The opposite is “intake,” which means fluids and solids taken in by the body for nourishment.
Oxytocin (Pitocin) – A hormone that stimulates uterine contractions and the “let down response” in lactating mothers.
Patent Ductus Arteriosus (PDA) (pat’-ent duck’tus ar-teer’-ee-oh-suss) – A temporary heart condition in some newborns. It can lead to heart failure if not treated. At first babies with PDA are usually treated with drugs. If this fails, surgery may be required.
**Glossary (cont.)**

**Perinatal** – Describing the period from 28 weeks gestation to one week following delivery.

**Perinatologist** – An obstetrician who specializes in complicated pregnancies and deliveries.

**Periodic breathing** – Breathing interrupted by pauses as long as 10 to 20 seconds, common in premature babies.

**Phototherapy** – Treatment of infants with jaundice by exposing them to bright lights called bililights.

**Physical therapist** – A health care specialist who helps babies improve control of their large muscles so they develop at the normal rate.

**Placenta previa** – A condition in which the placenta is abnormally positioned over the cervix, and can result in bleeding during middle or late pregnancy. Cesarean delivery is often necessary.

**Pneumonia** (new-moan'-yah) – An infection of the lungs that causes fluid to collect; making it difficult to breathe. An antibiotic is given to treat the infection. The baby may also be given oxygen or be put on a breathing machine.

**Post partum** – After delivery.

**Pre-eclampsia** (toxemia) – A complication of pregnancy in which the mother has protein in the urine, high blood pressure, rapid weight gain and swelling from fluid retention.

**Premature formulas** – Special formulas designed to meet the needs of premature infants.

**Premature infant** – A baby born before the mother reaches 37 weeks of pregnancy. The word “premature” refers to something that happens before it’s supposed to.

**Prenatal** – Before birth.

**Pulmonary interstitial emphysema (PIE)** – A condition in which air bubbles are forced out of the alveoli and in between layers of lung tissues.

**Radiologist** – A doctor who has completed special training in the use of x-rays and other imaging studies for diagnosis and treatment.

**Respiratory distress syndrome (RDS)** – This previously was called “hyaline membrane disease.” Babies with RDS have trouble breathing. This condition is a common problem in premature babies because their lungs have not developed enough to work on their own.

**Red blood cells** – Cells in the blood that carry oxygen and carbon dioxide to and from body tissues.

**Respiratory therapist** – A health care professional who is trained to help people with breathing difficulties.

**Retinopathy** (ret’ inop’ athe) – An eye problem common in premature infants. The back of the eye (the retina) is injured and special treatment is needed. Whether the baby’s sight is affected depends on how severe the problem is and how well treatment works.

**Rooting** – Head and mouth movements made by a baby searching for a nipple on which to nurse. A mature rooting reflex (usually seen at 37 weeks gestation and beyond) consists of the infant simultaneously turning his head toward the nipple, opening his mouth, and extending his tongue to enclose the nipple.

**Scalp IV** – An IV placed in a vein located in the scalp.

**Seizures** – A “short-circuiting” of the brain’s electrical impulses. The body tenses up, and the baby may lose consciousness for a new moment.

**Sepsis** – An infection that gets into the blood, which can affect the baby’s whole body. Sepsis is treated with antibiotics. If the sepsis is severe, a blood transfusion may be needed where healthy blood is given to the baby at the same time that the baby’s own blood is removed.
Glossary (cont.)

Social worker – A specialist who helps families cope with emotional stress and makes practical arrangements for care. Social workers can also help patients and their families cope with financial stress and strain.

Surfactant – A substance formed in the lungs that helps keep the small air sacs, or alveoli, from collapsing and sticking together. Many premature infants are now given surfactant at birth to help prevent or minimize breathing problems.

Tachycardia – An abnormally fast heart rate, in an infant, above 160 beats per minute.

Trachea (Windpipe) – A tube that extends from the throat to the bronchial tubes.

Tracheotomy – A surgical opening in the trachea, below the larynx (voice box), made to allow air to enter the lungs when the throat becomes obstructed.

Ultrasound – A technique in which echoes of high frequency sound waves produce a picture of the body’s tissues.

Umbilical artery catheter – a small, flexible plastic tube inserted through a blood vessel in the infant’s navel. The catheter is used to obtain blood samples, provide nutrients, administer blood and medication, and monitor blood pressure.

Vein – A blood vessel leading to the heart. Veins carry non-oxygenated blood from the body to the heart, except for the pulmonary veins that carry oxygenated blood from the lungs to the heart.

Vital signs – Temperature, pulse rate, rate of respiration, and blood pressure.

Warmer – A bed that helps keep a baby at the right body temperature.
To find your baby’s weight in pounds and ounces, first locate his/her weight in grams. The number at the top of the column corresponds to pounds. The number in the far left corresponds to ounces.

### Weight Conversion Chart

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Keep Track of Your Baby’s Growth by Age and Weight
Daily Journal and Milestones

Use this section to record your baby’s progress and milestones.
**Important Telephone Numbers**

**NICU Main Line**  
337–521–9100, Ext. 5426, 5427 or 5428

**Toll Free number**  
1–888–569–8331

**NICU Pod A**  
337–521–9100, Ext. 5295

**NICU Pod B**  
337–521–9100, Ext. 5294

**NICU Pod C**  
337–521–9100, Ext. 5297

**NICU Pod D**  
337–521–9100, Ext. 5298

**NICU Discharge Coordinator**  
337–521–9105

**NICU Charge Nurse**  
337–521–9100, Ext. 5310

**NICU Manager**  
337–521–9100 Ext. 9231 or 9220

**NICU Director**  
337–521–9104

**Audiology**  
337–521–9100, Ext. 5425

**Billing**  
1–866–453–5905

**Cashier’s Office**  
337–521–9100, Ext. 5319

**Early Intervention**  
337–521–9100, Ext. 5383

**Lactation**  
337–521–9138

**Medical Records**  
337–521–9100, Ext. 5350

**Occupational Therapy**  
337–521–9100, Ext. 5742

**Resource Management**  
337–521–9318

**Social Services**  
337–521–9100, Ext. 5380 or 5381