Johns Hopkins Bayview Medical Center

A Parent's Guide to the NICU

JOHNS HOPKINS
MEDICINE

Welcome to the Neonatal Intensive Care Unit (NICU) at Johns Hopkins Bayview Medical Center. We know this is a difficult time for your family and you may have many questions. The information provided in this booklet will help you better understand our unit and the care we are providing your baby.

Please feel free to reach out with any questions. We're here to support you and make sure your stay is as comfortable as possible.

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ABOUT US

The NICU is a 26-bed, Level IIIb unit with nearly 375 admissions every year. We care for all kinds of newborns, including very early (premature) babies and full-term babies who are mildly to severely ill.

Parking

Parking is available in the garage, located across from the Bayview Medical Offices (blue awning) entrance. Every NICU family is eligible for five parking passes per week, which are valid for up to 24 hours (single use only). Please ask your social worker for these passes.

Cell Phones and Electronic Devices

You and your visitors must keep cell phones and personal electronic devices silenced when visiting with your baby. **After touching your cell phone, you must wash your hands with either hand sanitizer or soap and water before touching your baby or the bedside.**

Communicating With Your Baby's Nurse and NICU Staff

When calling for updates, the nurse will ask for your last name and a patient identifier. This is for security and patient privacy.

NICU A: 410-550-0395

NICU B: 410-550-0378

Language Assistance (Interpreters): 844-765-9930

Medical Director:
Dr. Kartikeya Makker
kmakker1@jhmi.edu

Associate Medical Director:
Dr. Jennifer Fundora
jfundor1@jhmi.edu

Nurse Manager:
Jennifer Bertoni
jberton2@jhmi.edu

Assistant Nurse Manager:
Eveline Guzman
eguzma12@jhmi.edu

MyChart

Parents and guardians have full access to all MyChart features through their own MyChart login. Log on to **mychart.hopkinsmedicine.org** from your computer or mobile device to see your baby's medical records.

Security

For the safety of our patients, all visitors, including parents and their support circle, will be asked to show a picture ID at the security desk. A visitor badge will be provided and must be worn at all times.

Parents will be given baby companion bands. These bands must be worn in order to visit and take your baby home. If you lose your band, please notify your baby's nurse as soon as possible.

Note: The NICU leadership team and/or security reserve the right to deny visitors if there is a safety or security concern.

Personal Belongings

You may store any personal items in a locker while you are visiting your baby. Ask the person at the front desk or your nurse for a key.

VISITATION

Please note that during flu and RSV season, visitation guidelines may change.

- **Parents may visit their baby 24 hours a day,** with the exception of shift change (7-7:30 a.m. and 7-7:30 p.m.). This helps us maintain the privacy of other patients while the team discusses medical information.
- **Four people (18 and older) can be identified as your support circle and may visit without the baby's parents.** The support circle cannot change and members cannot bring others to visit. They will not be given medical information. Please give the names of those in your support circle to your baby's nurse.
- **Only two visitors are permitted at the bedside at a time.** If the visitor is not listed in the support circle, they must be with the baby's parent when they visit.
- **Siblings over the age of 3, who are feeling well, may visit.** During flu and RSV season, siblings must be over the age of 12 to visit. Siblings 3-10 years old may only visit for 30 minutes. Children must be accompanied by an adult at all times.

Note: *The NICU reserves the right to limit visitors in the best interest of patients, families and guests. Please do not let anyone who is not feeling well or who has been exposed to a contagious disease visit.*

HANDWASHING

All visitors coming into the unit must follow these steps to help keep the NICU babies from getting an infection.

1. **Wipe down your electronic devices with a disinfectant wipe.**
2. **Wash your hands at the sink.**
   a. **Turn on the water.** Use your foot to press down on the pedal. Wet your hands and arms up to your elbows.
   b. **Use a sponge and nail tool.** Use the nail tool to get any dirt or debris out from each nail. Use the sponge to scrub from the elbows down. Be sure to scrub all surfaces for a total of 2 minutes. Refer to the detailed instructions at the handwashing sinks.
3. **Use hand sanitizer any time you enter or exit the bedside.**

RECEIVING UPDATES

Phone Calls

NICU A: 410-550-0395 | NICU B: 410-550-0378

- You may call the NICU at any time to ask about your baby, except during shift change (7-7:30 a.m. and 7-7:30 p.m.)
- Medical information will only be given to the parents listed on the birth certificate. Your companion band has your baby's medical identification number (BV number). We will ask for the last four digits of that number or information to confirm we are speaking with a parent.
- Make sure that we always have a way to reach you by phone. Let us know about any updates to your contact information, including your address.

Visiting

- Parents may visit their baby 24 hours a day, except during shift change (7-7:30 a.m. and 7-7:30 p.m.).
- You can ask for updates during your visit, as well as participate in your baby's care.

Rounds

Every day, the team taking care of your baby will discuss how he/she is doing. This is an opportunity for the team to come together to coordinate care and discuss growth, feeding and any other patient-specific needs. Parents are welcome to join rounds and ask questions.

Please let your nurse know if you cannot be present for rounds, but would like for us to call you.

SPENDING THE NIGHT

There is a sleep room available for parents to stay in the event of an emergency or if your child is in critical condition. Please talk to your nurse if you are interested in spending the night.

Temporary Lodging

Families who live more than 30 minutes away may be eligible for temporary lodging at the Ronald McDonald House. The facility provides families with their own room and access to a common living and kitchen area, as well as parking for one vehicle.

Ronald McDonald House
201 Aisquith Street
Baltimore, MD 21202
rmhcmaryland.org

There is no fee to stay at the Ronald McDonald House; however, there is often a wait list. Other accomodation should be made until a room is available. If you need help with this, please contact your social worker at **410-550-0158**.

Patients of Johns Hopkins and their families can also receive discounts at local hotels. Scan here to view a list of participating locations.

MEET THE TEAM

Many people work together to care for your baby. These are some of the people you will meet:

Attending Physician (Neonatalogist) – Our doctors are trained to care for critically ill newborns. They will oversee and coordinate your baby's care. The attending physician changes every two weeks. A different attending usually covers overnight or on the weekends.

We are a teaching hospital and have other doctors in the NICU who are in training. These doctors work closely with and are always under the supervision of the attending. You will meet two types of doctors-in-training:

> **Fellow –** A fellow is pediatrician who is training to be a neonatalogist. The fellow works closely with the attending to oversee the care of all the babies in the NICU. The fellow changes every two weeks.
>
> **Resident –** A resident is a doctor who has finished medical school and is training to be a pediatrician. The residents rotate every four weeks.

Neonatal Nurse Practitioner (NNP) – The NNPs are a team of care providers with advanced degrees who specialize in the care of critically ill newborns. They oversee and coordinate your baby's care directly with the attending physician.

Nurse Manager – The nurse manager is Jennifer Bertoni. Please feel free to contact her with any concerns you may have about your baby's care while you are in the NICU.

Assistant Nurse Manager – The assistant nurse manager is Eveline Guzman. Please feel free to contact her with any concerns you may have about your baby's care while you are in the NICU.

Discharge Coordinator – The discharge coordinator is Carol Vujanic. She will help you with your discharge needs, as well as make appointments for your baby once they are ready to go home.

Nurses – The nurses in the NICU are trained in the care of critically ill newborns.

Social Worker – Each baby is assigned to one of our NICU social workers. They will help connect you with community resources, transportation and local accommodations, and provide emotional support during your child's stay. If you need to speak with one of our social workers, call 410-550-0158.

Respiratory Therapist – Respiratory therapists help with breathing support and manage the respiratory equipment on the unit.

Pharmacist – Our pharmacist will provide information and advice on prescribing medication to your baby.

Neonatal Dietitian – Our neonatal dietitian works with your baby's care team to provide the best nutrition for your baby.

LACTATION SUPPORT

A board-certified lactation consultant is available to support your needs and answer any questions you might have.

Providing Breast Milk

There are many great benefits to providing breast milk:

- Easier to digest than formula
- Protects against infection
- May reduce against the risk of Necrotizing Enterocolitis (NEC), a rare but life-threatening infection of the bowel that can affect premature babies
- Contains critical growth factors that promote gut development

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- If your baby is transferred to the NICU, try to start pumping or hand expressing within one hour of delivery. Ask your nurse if you need assistance with pumping.

Scan this QR code to learn about the Medela Symphony pump. Scroll down to videos and downloads for step-by-step instructions.

- Pump every three hours to establish milk supply (e.g. 8 a.m., 11 a.m., 2 p.m., 5 p.m., 8 p.m., 11 p.m., 2 a.m., 5 a.m.). Set an alarm on your phone as a reminder. Wash supplies after pumping. Milk can be brought to the NICU by a family member or the mom's nurse. Make sure you label the milk.

- Use colostrum collectors and syringes to pull up every drop of that liquid gold. Label it with the date and time pumped. Pump both breasts for 15 minutes each time until your milk comes in.

- It can take 3-5 days for your milk to come in. Once your milk comes in, you can pump until your breast are fully empty. Be sure to hand massage your breasts before and throughout pumping to maximize the volume you pump.

- If you need a pump, ask your nurse to help you get one. Be sure to hold onto your hospital kit so that you can pump at the bedside when you visit. *Note:* The pump that you take home and the hospital pump are different. Parts will not be interchangeable.

Storing and Transporting Breast Milk

The NICU will provide labels, bottles and a cooler for you to transport your milk from your home to the hospital. Be sure to place an ice pack in the cooler to maintain a cold temperature for the milk. Please do not store milk in "bags." Our milk techs only accept milk in the bottles that are provided to you.

Donor Breast Milk

If your baby is premature and/or critically ill, it may be recommended that your baby receive donor breast milk if maternal breast milk is unavailable or in a limited supply. This allows the baby to initiate feeding without adding extra stress to mom.

NICU EQUIPMENT

We use different types of equipment to care for the babies in the NICU.

Isolette – Premature babies cannot maintain their body temperature without some source of heat until they are about 33- or 34-weeks' gestation. An isolette helps maintain their temperature.

Crib or Bassinette – Both are used for bigger babies that can maintain their temperature outside of the isolette.

Monitor – Every baby in the NICU is on a monitor that shows the baby's heart rate, respiratory rate and blood pressure. There are soft leads placed on the patient's chest to help measure these numbers. There is also a pulse oximeter on the babies foot or wrist to measure the oxygen in the blood.

Ventilator – This machine helps the baby breath and can provide extra oxygen.

Endotracheal Tube – This breathing tube passes through the baby's mouth into his/her airway and is taped to the baby's face to hold it in place. It is connected to the ventilator.

CPAP (Continuous Positive Airway Pressure) – When the baby is breathing on their own, the CPAP allows pressurized air to help keep the lungs expanded. Extra oxygen can be delivered as well.

Nasal Cannula – This small, soft plastic tube has short prongs that fit in the baby's nose. It gives the baby extra oxygen or air flow to help remind the baby to breathe.

LINES AND TUBES

Your baby may/may not require some or all of the following.

Feeding Tube – At first, premature babies are unable to eat by mouth. They cannot coordinate an adequate suck-swallow-breathe pattern until around 34 weeks. Inserting a feeding tube allows us to feed the baby breast milk or formula.

Intravenous (IV) Line – Most babies in the NICU require an IV. This allows us to deliver medications, fluids and IV nutrition.

Central Lines – This is a special IV that is longer in length. The most common central line in the NICU is called a PICC line. It goes into a larger vein and can stay for several weeks, if necessary.

Umbilical Lines – There are two types of umbilical lines: arterial and venous. This catheter goes through the umbilical cord and can be used to administer IV fluids, blood products and medications. These may remain in place for about a week.

PREMATURE BABIES

Premature babies may experience a number of health problems. Below are a few examples.

Apnea and Bradycardia

Apnea is when a baby stops breathing for 20 seconds or longer. When this occurs, the baby's heart rate might also drop below a normal rate. This is called a bradycardia. The alarms on the monitor will let us know when this occurs. This is a common problem that premature babies have because the part of the brain that regulates heart rate and breathing is still immature. During some of these episodes, the baby will start breathing again on its own. If the baby does not, he/she will require stimulation. This is done by gently patting or rubbing the baby's back. Most babies outgrow this by the time they reach their due date. Depending on how early your baby is born, they may need to go 3, 5 or 7 days without an event before going home.

Feeding Your Baby

Coordinating sucking, swallowing and breathing at the same time does not happen until around 34 weeks. Some babies are able to do this earlier, others later. Until this coordination develops, the baby will not be able to take a bottle or nurse at the breast. The baby will be fed with a small feeding tube through the nose or mouth that passes into the stomach. This is called tube feeding or gavage feeding. The baby can be fed breast milk, donor breast milk or formula.

If you are providing breast milk for your baby and need to pump while visiting, just let your baby's nurse know and the nurse can get the appropriate pump or the kit that you were given. You may put the baby to the breast as the baby gets closer to discharge. Feel free to ask for our lactation consultant or your baby's nurse for guidance on putting the baby to breast.

Premature babies have increased nutritional needs compared to full-term babies. Typically, we will fortify their breast milk or give special pre-term formulas to ensure that they get enough calories, vitamins and minerals for their growth and development.

Pain

Since babies are unable to tell us if they are in pain, we will assess levels based on crying, facial expressions, muscle tone and vital signs. Ask your nurse for ways you can decrease pain in your baby.

Temperature Control

Most premature babies need help to keep their body temperature at the right level. The isolette bed will adjust to the baby's temperature and either heat up or cool down to maintain a stable temperature. It is important to hit the air boost button when opening the isolette for care and make sure the isolette doors are shut when you are finished. As your baby gets bigger, the team will work on weaning your baby to an open crib.

Eyes

Think of the eye as a camera and the retina like the film. The retina is the inner lining of the eye that receives light and turns it into pictures that are sent to the brain. Blood vessels that supply the retina are one of the last structures of the eye to mature. They have barely completed growing when a full-term baby is born. This means that a premature infant's retina is not completely developed. For reasons not yet understood, the blood vessels in the immature part of the retina may develop abnormally in some premature infants. This is called Retinopathy of Prematurity (ROP).

At the request of your baby's doctor, eye exams may be performed to test for ROP. Babies less than 1,500g (3.5 pounds) birth weight, less than 31 weeks gestation, as well as other children designated by the doctors will be examined. These exams begin around 4-6 weeks of age or by 31 weeks and are repeated every 1-2 weeks or as needed.Outpatient follow-up may be required after discharge.

TOUCHING, INTERACTING AND HANDLING YOUR BABY

At times, the NICU may be stressful for your baby. This section will help you learn more about your baby's responses and suggest ways to help your baby deal with the stress.

Signs of Overstimulation

- Color change (pale/flushed)
- Hiccups, gagging, spitting up
- Changes in breathing pattern
- Oxygen levels drop
- Frowning, grimacing, worried expression
- Changes in muscle tone (floppy, limp or extremely stiff)
- Avoids eye contact
- Sneezing or yawning
- Trying to change position
- Getting into a drowsy or light sleep to shut out stimulation

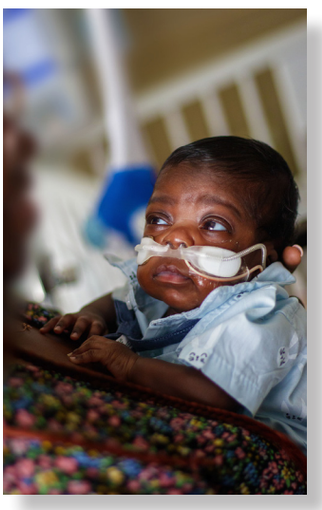
Signs of Comfort

- Bracing legs or back against side of bed
- Hands clasped
- Hands near mouth
- Sucking on pacifier, hands or fingers
- Relaxed limbs
- Eyes open
- Stays in a cuddled position

All of these behaviors are used by the babies to reduce overstimulation. These skills require a lot of energy from babies and may tire them out easily. Never wake a sleeping baby while visiting the NICU.

Ways to Help Your Baby

- Open and close doors of the isolette quietly.
- Speak to your baby in a quiet voice.
- Swaddle (if age appropriate)
- Hold your baby skin-to-skin. This benefits you and your baby. The baby rests on your bare chest, only wearing a diaper and possibly a hat. Baby is then covered with a blanket. This is ideally done for at least 1 hour.



THE CUDDLER PROGRAM

Parents are always the first choice for snuggles. If the baby is medically appropriate, a cuddler can step in if the parents are not present.

What is a Cuddler?

A cuddler volunteer is a trained adult, who is able to:

- Hold the baby under the supervision of NICU staff
- Talk to the baby in soothing and stimulating tones and words
- Console the baby with sensitive comfort and positive touch

Research shows that cuddling:

- Is vital to a child's emotional well-being
- Helps meet developmental and social milestones
- Increases learning ability and provides emotional support which develops greater self esteem

Benefits of a Cuddler

Babies who are cuddled often demonstrate greater growth, physiologic stability and have shorter hospital stays than babies who have not been cuddled.

How Can My Child Be Part of the Program?

It's easy! Ask someone on your baby's care team about the Cuddler Program and let them know you are interested. You will also need to fill out a consent form.

HEADING HOME FROM THE NICU

You and your baby must meet the following goals before going home.

1. **Pick a pediatrician.**
   - Recommendations from friends/family
   - Does the doctor accept your insurance?
   - Office location
   - Office hours
   - Is there an on-call doctor?
   - If your baby has complex medical problems, does the doctor have experience caring for children with similar problems?
   - What hospital will your baby be referred to if he/she needs to be admitted?

   Note: The discharge coordinator and social worker can also provide you with a list of local pediatricians. The discharge coordinator can also help with follow-up appointments.

2. **Your baby has to be bradycardia- and apnea-free in order to go home.**

3. **Your baby must be taking all of his/her feeds by mouth and showing steady weight gain.**

4. **Your baby has to be out of the isolette and in a bassinet or crib, and able to maintain his/her body temperature.**

5. **You will be given prescriptions for any medications your baby may need at home.** Your nurse will show you how to give the medicine to your baby.

6. **You need to watch the CPR and Safe Sleep videos.** These videos can be watched at the bedside, or you can access them through the baby's myChart.

7. **You will need to bring a car seat to the NICU.** Your baby's nurse may perform a car seat test closer to discharge to be sure that your baby can breathe effectively and travel safely. Read your car seat manual and make sure you feel comfortable using the car seat before you take your baby home.

8. **If your baby needs any special care, the nurses will show you how to take care of these needs before discharge.**

9. **All babies are due for important vaccinations at certain ages.** If your baby is ready for any vaccination before discharge, we will discuss this with you and ask for your permission. We will let your pediatrician or clinic know what vaccines, if any, your baby has received.

Use this checklist to keep track of your baby's progress. The more goals that are met, the closer your baby is to going home!

- ☐ Pediatrician has been identified
- ☐ No breathing problems
- ☐ Feeding by mouth *(breastfeeding, bottle feeding or a combination of the two)*
- ☐ Steady weight gain
- ☐ Sleeps in a bassinet or crib
- ☐ Has not has a brady event in designated amount of time *(3, 5 or 7 days)*
- ☐ Medications filled
- ☐ Newborn education
- ☐ CPR/Safe Sleep videos
- ☐ Car seat ready and car seat study (passed)
- ☐ Special teaching
- ☐ Mixing fortified breast milk or formula

NOTES:

NICU Reunion

We look forward to seeing your baby graduate from Johns Hopkins Bayview's NICU.

All graduates and their families are invited to our NICU reunion. Details will be sent using your address and phone number from admission, so please update us if any changes are made.

We love seeing how your child grows, so please send pictures and updates to **NICUGRADS@live.johnshopkins.edu.**

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4940 Eastern Avenue
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