

Technology in the NICU

Narrator

When parents first arrive in the NICU, they often encounter a lot of imposing technology surrounding their baby. You're asking yourself, "What are all these scary tubes and IVs doing attached to my baby? What does that blinking monitor tell me about how my baby is doing?" Well, the technology in the NICU is giving the staff valuable information about your baby's condition, and helping to alert them to any important changes.

Kara Calkins, MD

The NICU is very technically complicated and it's certainly a very scary place when you enter into the NICU. But all of that technology really has furthered the care of babies and really has a direct relationship to the positive outcomes.

Vedang Londhe, MD

There is a variety of different monitors with a lot of beeping that often goes on. And the most important thing we tell parents is not to focus so much on the numbers or the beeping. Most of that is just information that's real time giving us an idea of what's happening with the baby. It monitors things such as the baby's heart rate, respiration, blood pressure sometimes. And in addition there may be other components that are involved, which can include ventilators, which may be helping to actually help the baby breathe.

Kara Calkins, MD

If a baby does not require a breathing machine but still needs some extra help breathing we can often apply something called a nasal cannula and that provides a little bit of oxygen and flow to assist them during that time when they're having difficulty breathing.

We also place IVs and what we call central lines, and those are hooked up to pumps that are placed on pulls next to the babies, and those pumps through the lines deliver medications and fluids or nutrition to assist the baby while they're in the NICU.

Narrator

Most babies start out in an isolette, a bed that keeps them warm while enabling staff to easily see them and monitor their condition. While in the warming bed, your baby might also need a number of tubes and lines to help them get better.

Jeannette Whitney, MD, Neonatologist

There are several wires that we put on to monitor their heart rate and their breathing, and also to monitor their temperature. The next thing we do is we usually put a tube down in through their mouth that goes into their stomach, and that's a feeding tube. And that stays in there, and it's not necessarily to feed the baby initially. It's just to get the air off the stomach so that the stomach doesn't distend.

The next kind of tube that the family may see are a breathing apparatus, and it could be an ET tube, or an endotracheal tube, and it goes into the trachea down into the lungs, or a CPAP, and those are big prongs that go into the nose, and they really force air into the lungs to keep them distended.

Narrator

While the baby is in the isolette, the NICU staff is controlling the temperature, light and sound so babies can sleep.

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Erin Hamilton Spence, MD, Neonatologist

A baby who comes here who is premature does have slight difference in the way they sense the world compared to you and I, so we try to make it a quiet environment when they're inside the isolette. We also make it as warm and comfortable as possible by keeping it at a certain temperature that helps them stay, what we call thermoneutral, which just means they're just not using any calories to keep themselves warm. There are a variety of things we do to help their sight, as their eyes are so sensitive. If it's a very sick baby or a very fragile baby who's premature then we certainly minimize the light as much as possible.

Narrator

All the technology in the NICU will seem intimidating at first. But the NICU staff is there to help you understand it all.

Valencia Walker, MD

One of the first things we typically do when a parent visits for the first few times is to walk them through what everything is doing. The blue color means the oxygen saturation is good, the green color means the heart rate is good, the yellow color means the respiratory read is good in terms of the colors we see on the monitor. And then we just show how for the most part, those are just a lot of extra tubes and wires that aren't really hurting the baby, but are helping us understand how to make your baby better.